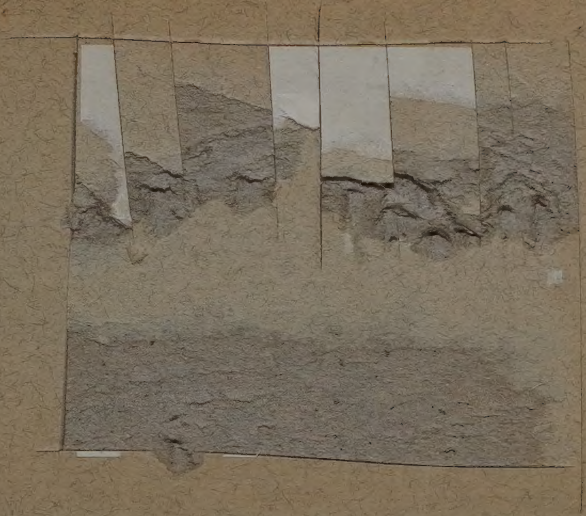
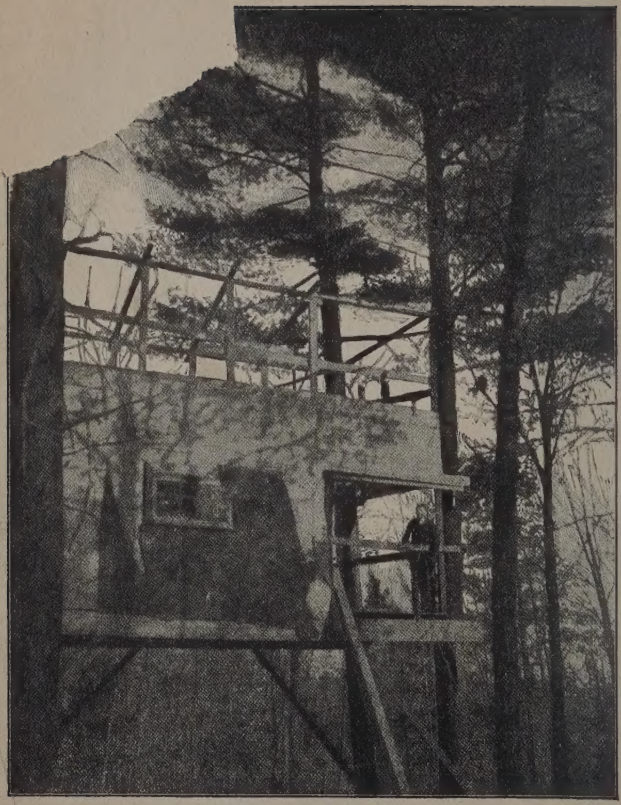


THE BOY PIONEERS
SONS OF DANIEL BOONE

Due Mar. 2



"Fort" Being Built by "Scout" LeRoy Dresser, Jr., Aged 15 Years, on Westminster School Grounds, Simbury, Conn.

THE BOY PIO

SONS OF DANIEL

BY

D. C. BEARD

AUTHOR OF "THE FIELD AND FOREST HANDY BOOK,"
"THE JACK OF ALL TRADES," "THE OUTDOOR HANDY BOOK," ETC.

ILLUSTRATED BY THE AUTHOR

NEW YORK
CHARLES SCRIBNER'S SONS
1911

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FOREWORD

THIS book is written for all boys. It is neither required nor expected that every one of its readers will belong to the Society of the Sons of Daniel Boone, but one use of the Society has been to afford occasion and opportunity for working out an original scheme for boys' clubs, recreation, and achievement, which is here put in the compact and convenient form of a new boys' book for the use of the readers.

Daniel Boone is, as doubtless he will always remain, the American boy's chosen hero.

> "The great West nursed him on her rugged knees,
> The strength of virgin forests braced his mind,
> The hush of spacious prairies stilled his soul."

He certainly deserves the place he occupies in the boy's estimation. He and Simon Kenton, Kit Carson, Davy Crockett, Appleseed Johnny (Jonathan Chapman), and the great Abraham Lincoln could be produced only by the strenuous frontier life. It may be truthfully said of any one of these men, as it was said of Lincoln:

> "The color of the ground was in him, the red earth,
> The smack and tang of elemental things:
> The rectitude and patience of the cliff;
> The good-will of the rain that falls for all."

Men of this description are not the product of an over-refined civilization. At times they might be and, indeed, are called barbarians. They are essentially boyish; like boys, they have restless minds and are noisy, energetic, fun-loving creatures, and, while

[redacted]rue manhood, it cannot be denied [redacted]ficial deportment that sometimes masquerades as real dignity.

But the author thinks that boys are all right; owns up that among his fellow-men he loves best those of his older friends who still retain most of their boyish traits, and after thirty years of experience with the boys he has no hesitancy in confessing that he thinks it a greater honor to possess the love and respect of the lads of this country than it would be to wear the button of the Legion of Honor, the Carnegie gold medal for heroism, or the stars and orders bestowed by the monarchs of Europe, or even to occupy the high office of President of the United States.

One of the principal purposes in forming and carrying on the Society of the Sons of Daniel Boone was to awaken in the boy of to-day admiration for the old-fashioned virtues of American Knights in Buckskin and a desire to emulate them, which is the more likely to succeed because the average boy has rough-and-ready virtues of his own somewhat similar in character. We often hear of foot-races, base-ball games, and other athletic contests being sold out for money, but we never hear of boy athletes or their base-ball or foot-ball teams selling their games.

Another purpose the author had in view in getting up and promoting a society of this sort, besides furnishing entertainment for the boys, is the serious one of educating our lads early in life to an appreciation of the absolute necessity and value of our forests and natural resources, for we must all agree with President Roosevelt's message when it says:

"If there is one duty which more than another we owe to our children and our children's children to perform at once, it is to save the forests of this country, for they constitute the first and most important element in the conservation of the natural resources of the country."

And it is because this Society stands for just such sentiment that the founder received the personal indorsement for his Society of President Roosevelt, Admiral Dewey, Major-General Bell, Chief of Staff, U. S. A., John Muir, and other noted men.

The older generation of men, the ones with frosty locks or bald heads, had no practical boys' books to help them in their sports. The antique "English Boys' Own Book," antique even in their day, was the only one in the field, and the other juvenile books of those days were filled with goody-goody talk about namby-pamby boys who, if they really existed, were fit for nothing outside of the nursery.

Everybody knows that adventure, daring, and skill appeal very forcibly to the juvenile mind and heart, but the only writers in our boyhood days who recognized this fact were the authors of the yellow Beadle Dime Novels and other similar literature. Those books consisted of wild and lurid fiction, probably not the right sort to be given indiscriminately to the boys to read; yet, if I remember aright, their heroes were always brave and the heroines pure; they were at least clean books, and described and told of a life that is dear to every healthy boy's heart.

Captain Mayne Reid and Fenimore Cooper were also patronized to some extent by the lads of that period, but the dime novels were easier of access and found more readers than any of the books by the more respectable and cultured authors, with the possible exceptions of such books as "Robinson Crusoe" and "Swiss Family Robinson."

It was the recollection of these facts and the desire to furnish the youths with a healthy outlet for their surplus energy which prompted the writer, while he was editor of *Recreation*, to invent and found the Society of the Sons of Daniel Boone. The result has more than justified the founder in the belief that such a society was needed, and would appeal with equal force to the boys, their parents,

teachers, and all those who are interested in boys' clubs and the welfare of the American youth.

The success of the project is proved by the fact that there now exists in this country some twenty odd thousand boys wearing the button of the Sons of Daniel Boone, and the demand upon the founder's time has become so great that he has frequently written over fifty letters to the boys in one day; so, partly in self-defence, he is issuing this book, which tells all about the Society, how to form a Fort, how to build one, how to conduct the meetings, how to win the honors, and how to do innumerable things, besides how to have lots of out-door fun in a sane, common-sense, enjoyable way.

In this I have the support of such authority as Dr. Eliot, of Harvard, who in a speech recently advised the students that if they wanted to make education effective they *must do the things themselves*.

The working drawings of the tree-top house, a back-yard switchback, a paper balloon, a back-yard zoo, a back-yard fish-pond, a tailless kite, a log house, a house-boat, and many other similar devices *appeared first* in the articles written by the author for the boys of America, and, what is much better, the boys have justified the author's belief in their ability by building all these things unaided by the grown folks.

From the Pacific to the Atlantic Ocean, from Cobalt, in the far North, to old Mexico and tropical South America, the tree-top houses, switchback, and other pieces of engineering described in the Beard books, have been successfully accomplished by the boy readers. Of course, this is a great source of satisfaction and pleasure to the author, but it was not an altogether unlooked-for result.

In late years, however, when the writer has met prominent naturalists, college professors, and men standing at the head of the movement for the preservation of our forests, and has been told by these

distinguished and useful men that they first imbibed the love for the great out-doors and Mother Nature from his writings, he has felt a deep sense of gratitude that he has been able to exert such influence, which has stimulated and encouraged him to the belief that his books for boys have produced grander results than he himself dared hope for at the time that they were written.

The thanks of the author are due to Mr. Caspar Whitney, Mr. Arthur Vance, and the other editors for their promptness in returning original drawings used in their magazines. A delay on their part would have delayed the publication of this book, as many of the originals were necessary as illustrations in this volume.

The Pictorial Review, at the present writing, is the official organ of the author's clubs for boys.

CONTENTS

CHAPTER		PAGE
	FOREWORD	v
I.	DANIEL BOONE	3
II.	HOW TO CELEBRATE APPLESEED JOHNNY'S DAY	18
III.	GENERAL SIMON KENTON, THE BUCKSKIN KNIGHT, HIS DAY AND HOW TO CELEBRATE IT	34
IV.	SIMON GIRTY, THE RENEGADE—GAME OF RENEGADE —HOW TO BUILD A PUSHMOBILE	50
V.	AUDUBON'S DAY—HOW TO RIG A HOUSE-WAGON FOR BOYS	64
VI.	SUMMER CAMPING IN TOWN OR COUNTRY FOR THE BOY PIONEERS	76
VII.	HOW TO FORM A BOYS' CLUB, BUILD A BOYS' CLUB-HOUSE, OR ORGANIZE AND ERECT A FORT FOR THE SONS OF DANIEL BOONE	88
VIII.	A MANDAN COUNCIL-HOUSE AND A BACKWOODS CAMP OR FORT—ALSO A CONSTITUTION TO HANG ON THE WALL	105
IX.	HOW TO MAKE WIRE KENS WITH THATCHED LIPKINS AND A BOW-ARROW DOOR	115
X.	HOW TO HAVE A CIRCUS IN THE WOODS—USE OF THE SCHOOL-BOY VAULTING-POLE, ETC.	125

CHAPTER		PAGE
XI.	Water Fun: Hints on Swimming—How to Make a Swimming Hole—How to Make a Pioneer Water Swing, and How to Make a Bison McClean Elevator	135
XII.	How to Talk the Real American Indian Sign Language as It Was Used in Boone's Time	153
XIII.	Novelties for Crockett's Day—How to Run a Costume Race, a Leap-Frog Race, a Wheelbarrow Race, and a Push-Wagon Race	165
XIV.	How to Throw a Tomahawk and Make Targets for Field Tournaments, and How to Initiate New Members in Your Club or Fort	176
XV.	How to Handle a Gun—A Lot of Gun Don'ts —Gumption for Chumps and Tenderfeet	190
XVI.	Fixing Up the Boys' Den, Club-Room, or Fort —How to Decorate and Paper the Inside of a Shed, Attic, or Stable-Room, and How to Make Furniture for It	201
XVII.	Shack Racks, Bobber Shelves, and Other Wrinkles	216
XVIII.	Totem-Poles, Totem-Boards, and Totem-Animals for S. D. B. Forts, Camps, or Country Houses	226
XIX.	How to Make a "Gym" in an Attic, a Boy's Den, Club-Room, or Fort	242
XX.	Winter Sports for Sons of Daniel Boone—Running the Indian Scouts, Catching the Raccoon, Running the Gantlet, "Gander-Pulling," and "The Goose Hangs High"	251

CHAPTER PAGE

XXI. KIT CARSON'S DAY CELEBRATION—SIEGE OF BOONESBOROUGH—SONS OF DANIEL BOONE DEFEND SNOW FORT AGAINST INDIANS—HOW TO BUILD SNOW FORT—THE MEDICINE-STICK: RULES OF GAME—THE BUFFALO HUNT AND HOW TO MAKE ANIMAL TRACKS 268

XXII. HOW TO MAKE YOUR OWN SNOW-SHOES 289

XXIII. HOW TO HAVE A HOLIDAY PARADE 296

XXIV. HOW TO MAKE AND USE SKATING WINGS 303

XXV. HOW TO BUILD A PIONEER BOB AND A CHEAP BOB-SLED 317

INDEX 327

THE BOY PIONEERS

SONS OF DANIEL BOONE

THE BOY PIONEERS

SONS OF DANIEL BOONE

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CHAPTER I

DANIEL BOONE

"Do all the good to your neighbor you can, do as little harm as possible, and trust in God."

DANIEL BOONE'S MOTTO.

THERE, boys! we're through with that Foreword or Preface and are ready to have a good time. I would ask you to excuse me for placing a foreword in the book at all if I thought you had to read it, but I know that boys mostly skip such things, and I remember that, as a lad, I myself never read the preface to a book.

These introductions, however, are required by all those good people—friends, teachers, uncles, aunts, and parents—who buy books for the boys, and that's the reason that fellows like me who write books always stick a preface of some sort at the beginning of our volumes.

Personally, however, I'd rather open with "Hello, boys, howdy!" or something like that, and then jump right into the contents, as I am going to do now.

The English lads look back with pride to the days of knight-errantry, when all the chivalry of the land went

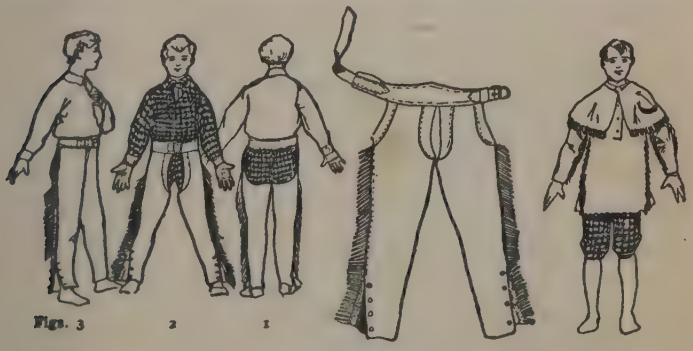
around dressed like oil-stoves astride of horses covered with gorgeous crazy quilts, and poked each other with long barber poles, or playfully hammered each other's heads with sledge-hammers and broadaxes. That was the time of Ivanhoe, the Black Prince, and Richard Cœur de Lion.

But America also had her day of chivalry, with knights as bold as any who wore an iron pot on his head on a hot summer day. Our knights, however, encased their limbs in fringed buckskin in place of stovepipes, and their bodies in tawny deerskin tunics, or "wammuses," instead of sheet-iron corsets. The American knight's arms consisted of a long rifle with a barrel ranging from four to five feet in length, trimmed with brass and with a brass patch box in the butt. Hung from the shoulder of each knight by a broad band was a bullet pouch made of deerskin, or often of some very valuable fur, and not infrequently beautifully decorated with beads. Over this hung a cow's-horn powder-flask, scraped smooth with a piece of glass and intricately engraved with a date, the owner's name, and rude representation of the chase, and pictures of wild animals and Indians, to which were often added cabalistic signs from old books of magic.

Thrust in the belt was a long butcher knife, a tomahawk, and sometimes a whetstone. The feet of the knights were encased in moccasins, and their heads in coonskin, bearskin, or foxskin caps. As a rule, they were tall, lithe men, usually with gray eyes, and wore their long hair either gathered in a queue, clubbed, or hanging loosely on their shoulders.

Like the old knights of Europe who wore iron clothes, the American heroes were unrelenting in their warfare; and yet they were men with big, kind hearts, who went into the serious game of frontier warfare with as much interest, zest, and enjoyment as the college boys of to-day display upon the foot-ball field.

The red men of those days, who contested inch by inch the ground of the frontier land of the Ohio River basin,



The Regulation Daniel Boone Uniform

were very much the same kind of men as their white brothers in buckskin—crafty but valiant warriors; many of them, like Logan, lofty and noble characters; and all of them worthy opponents.

There's one great difference between boys and other healthy animals. You may have heard people say, "As patient as a beaver" or "As patient as a cat watching a mouse-hole," but did you ever hear any one say, "As patient as a boy"? So it may be wise at the start to tell the reader how to make

A Pioneer Costume

A pair of brown overalls with fringe stitched on at the side seams makes good leggins, and an ordinary blue flannel outing shirt with a cape like a sailor's collar sewed on at the neck, and fringes at the seams of the sleeves and edge of the cape, is as much like the old hunting shirts as they are like themselves. Of course, the shirt must be worn *outside* of the trousers (Fig. 6).

Fig. 6.—One of the Sons of Daniel Boone

The regulation Sons of Daniel Boone uniform consists of leggins (Figs. 1, 2, 3, 4) and hunting shirt (Fig. 5). As may be seen in the diagrams, the leggins are made like the leather chaps worn by the cowboys, but fit the limbs more closely. The leggins have to be made so that they can be pulled on over the shoes and clothes, and to facilitate this the leggins have their seams open from the bottom to the calf of the leg. This opening

is furnished with buttons in a row on one side and buttonholes or loops on the other. A stout belt about the waist holds the leggins in place. The shirt is made exactly like an ordinary outing shirt, with the exception that it is adorned by a cape having a fringe and has fringes inserted in seams of the shirt. Figs. 5A and 5B show how the fringes are to be fastened in the seams and secured there by being stitched in place. *R* and *S* show how the edges of the cloth are turned in at the seam, and *T* the piece of fringe inserted. The fringes in the leggins are inserted in the same manner. A suit for winter wear may be made of blankets, as are the Mackinaw coats and trousers worn by the lumbermen in the North woods, and as were many of the hunting shirts of the old pioneers.

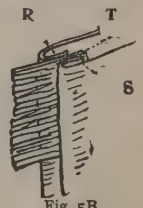


Fig. 5B

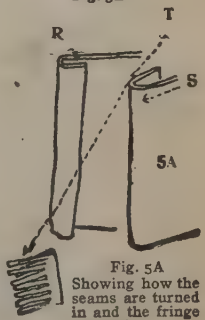


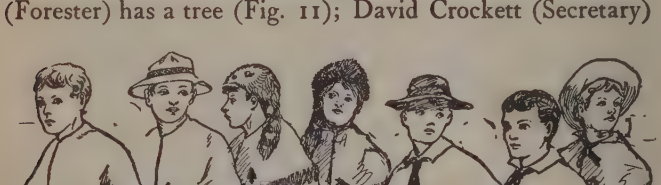
Fig. 5A
Showing how the seams are turned in and the fringe inserted

For summer wear, use blue denim with yellow flannel fringes. This makes a picturesque and very striking outing costume. Of course, the ideal uniform would be made of buckskin, but, unfortunately, buckskin, once the cheapest material for clothes, is now far too expensive except for the wealthier boys, or perhaps a few of the poorer ones who live on the outskirts of civilization.

The Officers

of each Fort of the Sons of Daniel Boone wear their rank on their left sleeve or the left corner of the cape of their uni-

form (Fig. 6). Each officer has a different totem sign: Daniel Boone's (President) is a powder-horn (Fig. 7); Simon Kenton's (Vice-president) is a tomahawk (Fig. 8); Kit Carson's (Treasurer) is a flint arrowhead (Fig. 9); Audubon's (Librarian) is a bird (Fig. 10); Johnny Appleseed (Forester) has a tree (Fig. 11); David Crockett (Secretary)



Figs. 7 8 9 10 11 12 13

has a coonskin (Fig. 12); Catlin, the totem painter, wears a buffalo head on sleeve; and each scout, as the other members are called, has a log cabin (Fig. 13). For the Boy Pioneers Davy Crockett or Kit Carson is president.

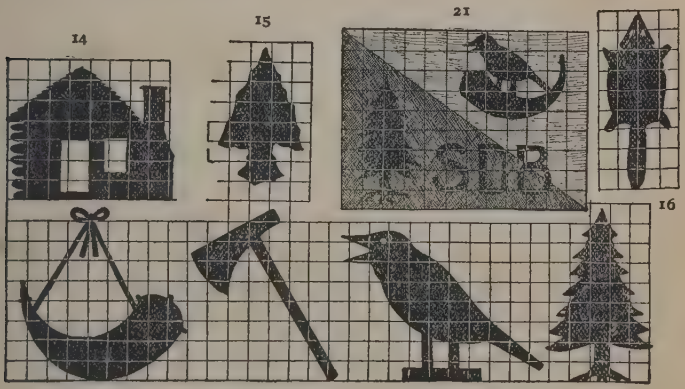
The Emblems

can be cut from any thick dark-green, red, or brown cloth or felt, and the patterns may be made by the reader himself by enlarging the ones shown in Figs. 14, 15, 16, 17, 18, 19, and 20, which are divided up into squares so as to enable the boys to copy them by making bigger squares and then sketching them in the proper size.

The Boone Flag

The lower triangle is bright turkey red, the upper one is buff or tan color, and the emblems are dark green.

The diagram of the flag is also divided into squares to help the boys to make a large flag from the pattern. If each square is called a foot the flag will be twelve feet by nine feet. If we call each square six inches, it will be six feet by four



Official Emblems of Rank and the Official Flag

and one-half feet. But if each square is called two inches, it will be only two feet by one and one-half feet. So you see that with this pattern your mothers, sisters, or aunts, or you yourself, can make a flag of the proper proportion and of any size.

Pioneer Days

All loyal Sons of Daniel Boone and all good American boys should observe the pioneer days, the first of which is

Lincoln's Day

February 12th; little Abe was born on this day in 1809. We must count the great Lincoln in among the Buckskin

Knights, for he himself said that in his youth his wardrobe consisted of a coonskin cap, a linsey-woolsey shirt, a buckskin wammus, deerskin breeches and moccasins.

Johnny Appleseed Day

The exact day of Jonathan Chapman's birth is uncertain, but Arbor Day is his day and the day which we celebrate where Arbor Day is observed. In a country where Arbor Day is not observed we choose the first day of spring, when the ground and conditions are right, for tree-planting. Next comes the birthday of

Simon Kenton

on April 3d, which is celebrated by the first out-door camping expedition. After that quickly follows

Audubon's Day

on the 4th day of May. This should be devoted to nailing bird boxes on all the trees within reach. Next in order is the midsummer holiday,

David Crockett's Day

on August 17th. This may be celebrated by camping, out-door games, and athletic contests. After that comes the hunting season. When the leaves have lost their beautiful autumn coloring and those that have not fallen are withered and brown, it is

Boone's Day

November 2d. This day can be devoted to out-door sport, throwing the tomahawk, and archery for all the boys, but

the older lads may engage in rifle practice. Right in mid-winter, the day before Christmas, is

Kit Carson's Day

because he was born on December 24th, and any Son of Daniel Boone who cannot think of something bully to do at that time can find it in the following pages. Snow forts, skating contests, running the gantlet, tracking in the snow, and, if the weather is bad, in-door games are in order. Kit was not only a great scout, but he was also a grandson of Daniel Boone, so be sure to remember him with a lively and enthusiastic day of fun.

Boone Day

does not come until autumn, but we are Boone boys, so a word about our patron saint is in order right here. There will be no attempt at a lengthy biography of any of our heroes. The reader can find books giving the lives of these men at all libraries, and a good biography of any one of the Pioneers would fill all the pages of this book; but a short sketch of some of our different characters may interest the reader, so a few such will be found in these pages.

Daniel Boone

Meeting descendants of an old hero whom we admire makes him more real to us. It is as if we were at the near end of the bridge, which spans the length of days, separating us from the object of our interest.

I personally know a number of the people who are descendants of the great, simple-hearted hunter, Daniel

Boone. Among these are Dr. Albert Shaw, editor of *Review of Reviews*, and Mr. John Cassel, whose excellent illustrations frequently appear in the magazines. Cassel has that dark, reddish hair of the old Boone tribe.

Boone Day comes very appropriately in the hunting season, for the great hunter, pioneer, backwoodsman, and State builder was born on November 2, 1734, in Oley Township, on Oatin Creek, Pennsylvania. He was of Quaker ancestry, and all through life retained many of the characteristics of the members of the religious Society of Friends, and never was guilty of using vulgar or coarse language. Rough as he was, he was not profane, but was a man of great action though of few words.

Fig. 22.—Daniel Boone's camp axe. (From a photograph)

Daniel Boone was what is called a fighting Quaker, that is to say, he believed in self-defence, when his own life or those of his friends or family were threatened by savages, and there were many Quakers of this kind on the Ohio frontier. Daniel Boone was a religious man, and firmly believed that he was an instrument ordained of God to open up the wilderness to be settled by Christians.

If our hero was a birthright Quaker, he was also a born hunter. When he was not more than eight or ten years old, he managed to kill birds and small game with no better weapon than a smooth rod with a small bunch of hard roots at one end.

His heart's desire, however, was a rifle, and when he was twelve years old his father gave him one. Never did a gift delight a boy more. Of course it was a man's size, for in those days no rifles were made for lads, and the men's rifles were, lock and stock, more than six feet long. We may fancy little Daniel Boone dragging about after him this great shooting-iron and looking about for a convenient stump or log upon which to rest it when he fired. Young Boone, however, in the due course of time, became strong enough to hold the long gun without a rest, and so expert in its use that it was no trouble to keep his family supplied with "meat fixings."

The young hunter left farming to the rest of the family and built himself a little lodge in the forest's depths, where he spent months at a time all by himself, especially in the fall and winter. He found more profit in the skins he dressed and sold at the nearest market towns than at the farm or the forge, for Daniel's father was a blacksmith.

When he came to the years of manhood, and after his return from Braddock's defeat, he married Rebecca Bryan, a sweet and pretty dark-haired girl of seventeen, who proved a good, faithful wife to him all her life long.

At the time he was married he was a powerfully built young man, five feet eight or ten inches tall, with the deep chest and broad shoulders of a modern foot-ball player or oarsman on a college crew. He had a firm, wide mouth with the thin lips of a man of strong character; his hair was reddish-black and long, after the style of the day; his eyes were blue and his sunburned eyebrows were bleached

to a yellowish color; his nose had a hint of the Roman in its form; his color was ruddy and fine from exposure, and his countenance noble, dignified, and striking.

Boone dressed like other backwoodsmen, in a fringed buckskin drawers and leggins, with moccasins on his feet, a wammus or long-tailed hunting shirt with cape or ornamental collar, trimmed with fur or fringe; but, unlike the others, he wore a Quaker's hat of felt in place of the ordinary coonskin cap, and when all wearers of felt hats had them cocked (the rim turned up on three sides) Boone wore his with a straight brim. Thus he was dressed when he married the pretty seventeen-year-old Rebecca Bryan.

Fig. 23

The primitive life led by these young people was almost the same as that of the mountaineers of Tennessee nowadays.

Boone was in no sense a scholar. He knew how to read and write, but his spelling was exceedingly queer. Education, however, has a broader sense than the acquisition of book knowledge, and Boone knew more about hunting and woodcraft than perhaps any man of his day or of ours. No one could more quickly or accurately tread the thickest forests or use his rifle, hatchet, or knife, or track wild animals to their secret retreats.

He was the man for the work he had to do, and he did it well and bravely, and showed as much intelligence and

manliness in what he accomplished as any individual who lived in his day or generation. He was a clear-minded man, and at forty years of age Boone still wore a felt hat, and showed his Quaker instinct by wearing buckskin clothes dyed black, his hair being long and clubbed in the back.

Boone said himself that he was an instrument of God to settle the wilderness, and proved it by his life.

The Sons of Daniel Boone stand for the preservation of our American birds and animals, and Daniel Boone himself was the first man in America to stand for game protection.

Before the Declaration of Independence was written, back in May, 1775, the hardy backwoodsmen of Kentucky formed themselves into an independent government of their own. Representatives from Harrodsburg, St. Asaph's, Boiling Springs, and Boonesborough met, formed a government, and passed laws. It was an assembly of backwoodsmen, but its proceedings were dignified and in due form.

In "Daniel Boone and the Hunters of Kentucky," by W. H. Bogart, published in 1854, we read that Boone was among the delegates, and one of his biographers says of him: "It was but a few months since he had been the only white man in all that country, with no form of human government about him; and here he was in the midst of a formal assemblage. But he made his presence known, and, true to the practical, earnest habits of his life, doing that which he could do best, on the first day the entry is this:

"'On motion of Mr. Daniel Boone, leave was given to bring in a bill for preserving game, and a committee was appointed for that purpose, of which Mr. Boone was chairman.'

"His next bill was one for improving the breed of horses. Both of these bills passed, were signed by the proprietors, and became laws."

The laws of this unauthorized legislature did not long hold power, but when one considers how slight an impression could have been made at that time on the natural abundance of game, one realizes what wonderful foresight Boone showed in introducing a measure for preserving it.

Fig. 24.—Boone's powder-horn

The first real Boone Day celebration was on June 15, 1906, at Louisville.

There was a reunion of the descendants of Daniel Boone in Cherokee Park pavilion, about a dozen lineal descendants of the great pioneer being present. The statue of Boone, modelled by Miss Enid Yandell, of Louisville, was unveiled. Following this a reproduction of one of the many stirring events in the life of Boone was given in another part of the park.

A stronghold situated upon the summit of a small elevation and called "Fort Boonesborough" was attacked by the hordes of "savages," who were on the point of overpowering and annihilating the garrison when a swarm of "pioneers," led by "Boone" in person, arrived in time to drive away the "Indians" and save the fort and its inmates. The spectacle was given in a vivid and realistic manner, and evoked the hilarious cheers of the thousands who had gathered to witness it.

Open-air dancing finished the day in the park, the programme being confined to reels and other dances in vogue a century ago.

In the evening there was a gorgeous illuminated parade. Fifteen wagons, decorated as floats, were in the column, each representing some stage in the progress of Kentucky.

Fig. 25.—Boone's spring trap. (Hand made)

This was followed by a grand ball in the armory, for which twenty thousand invitations had been issued. The grand march was led by the chairman of the ball and the members of the floor committee. Behind them came the queen of the ball, Miss Clara Haldeman, and Daniel Boone, impersonated by W. W. Davies. Following them came maids of honor.

The march ended at the foot of the queen's throne, which she mounted with Daniel Boone standing at her side.

A queen and a throne are about the last things that "ole Dan'l Boone" would have had anything to do with, but this was only a make-believe Daniel Boone. The queen herself was pretty, and maybe she looked like seventeen-year-old Rebecca Bryan, so we cannot blame Mr. Davies for climbing up to the throne. There are many lives of Daniel Boone for the boys to read that are thrilling and interesting, but the one by Dr. Reuben Goldthwaites is the most authentic.

CHAPTER II

HOW TO CELEBRATE APPLESEED JOHNNY'S DAY

WE are indebted to the Hon. J. Sterling Morton, formerly Secretary of Agriculture, for inventing and suggesting

Arbor Day

Nebraska was the first State to observe this day, and it was there officially noticed in 1872. Cincinnati followed in 1882, and now, not only all the States of the Union have followed Nebraska, each celebrating Arbor Day by tree-planting, but Great Britain, France, Spain, New Zealand, and Japan have also fallen in line.

Arbor Day is appointed each year in each State by the Governor, but here in America it should be called

Appleseed Johnny's Day

Let Kansas take just pride in leading the great movement, and all honor to Mr. Morton, but long before either this man or State was born, when the whole Middle West was raw and new land, it was visited by a real saint, an angel in grotesque and comic garb, Jonathan Chapman, who began planting apple-trees in a forest-covered country.

This was our hero, Johnny Appleseed, or Appleseed Johnny, as he was familiarly and affectionately named by

the early settlers and pioneers of the Ohio Valley. He was a unique character, deserving greater fame than he has ever received, even in the State of Ohio, where he did most of his unselfish work for the benefit of people who were to come after him.

The Story of Johnny Appleseed

There was something doing when Johnny was born, for it was in the same year as the battle of Lexington, the capture of Ticonderoga, the appointment of Washington as commander-in-chief, the battle of Bunker Hill, and the siege of Quebec that the stork flew through the powder clouds and battle smoke to Boston, and the little baby boy was born. He opened his infant eyes in stirring times, and no doubt stared in wonder at the excited men he saw about him bent on killing each other. It may be that the bloody scenes of his babyhood made a lasting impression, or it may be that in late years thoughtful study of the writings of that great teacher, Emanuel Swedenborg, exerted a powerful influence upon him, or it may be that this pure-minded, forgotten hero was sent by Heaven to teach the doctrine of peace; but whatever the cause, the fact remains that in the wilderness of the Ohio Valley, where even the

Fig. 26.—The wand

Quakers were fighters, the only disciple of peace was Jonathan Chapman, of Boston.

My own grandparents were among the pioneers of the Ohio Valley, and many an evening have I sat by my grandmother's knee watching her busy knitting-needles and listening to the adventures of this good man, who not only planted every open glade of the wild forest with apple-trees, but also planted the seeds of his new faith in the minds of the settlers.

With a courage equal to that of the great Daniel Boone or the famous Simon Kenton, Appleseed Johnny traversed the dark forests alone; but, unlike the other men, he went unarmed. Think of that, boys! There was courage for you, in days when the woods were full of Indians and wild animals! Once he crawled into a hollow log for shelter, but finding it already occupied by two cub bears, rather than disturb the animals he crept out again and made his bed in the leaves beside the log. He never was known to purposely kill a living creature, and he himself subsisted on corn and mush or porridge. The forests were infested with murderous savages, but there was always a welcome for Johnny at their wigwam and village. The river banks were the resorts of desperate river pirates, who lived by robbing flatboats and emigrants, but every robber's den had a cosey corner for Johnny. The backwoodsmen's cabins were small, one-roomed log buildings filled with children, but they were never so crowded that a hearty welcome and a place by the fireside were not waiting for Appleseed Johnny, and a cot or a buffalo-robe ready for him when he chose to sleep under their roofs.

Appleseed Johnny was a highly educated and cultured gentleman, but he dressed in coffee-sacking and a pasteboard cap. He did this, not to be queer, but because, when he had any clothes that were fit to wear, he gave them to some poor emigrant. Often he had shoes, but just as often he took them from his feet and gave them to some shoeless pioneer settler whom he met on his trail. It was clear that Johnny had money, because he always had a bunch of new ribbons for the little tow-headed girls who ran out to meet him from the lonely log cabins in the dark forests.

Coming to a log house, he would enter, throw himself on the floor by the fire, and, pulling out some fragments of the works of his great religious teacher, would exclaim, "Listen to the last message from God!" and robber and honest settler alike listened to the pioneer teacher.

From the cider-presses in Pennsylvania or from Fort Pitt, where Pittsburg now stands, he secured bags of apple seeds, with which he loaded his dugout canoe, and with this strange cargo he paddled his lonely way down the Ohio, planting orchards wherever an opportunity offered, ministering to the sick, giving to the needy, and living his life only for the good he could do.

The Indians looked upon him with awe, because when his bare feet would be cut and torn with the brush and frozen mud, he would calmly seat himself by their campfire, heat an iron white-hot, and burn out the cuts and wounds, which then readily healed.

Quaint and weird as this young man of twenty-six must have appeared, in his ragged garments, bare feet, and pasteboard cap, no one, not even the small boys, ever laughed

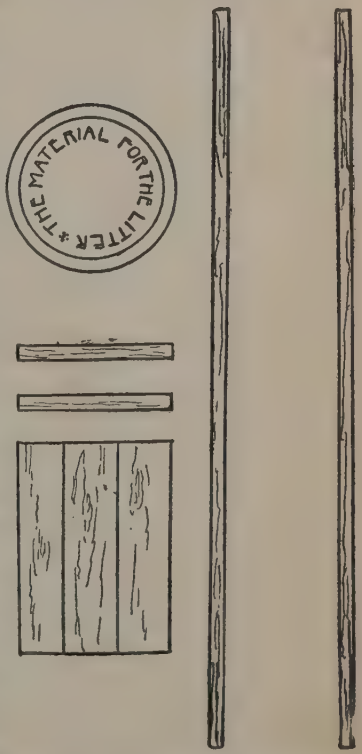
or jeered at him; but he was universally treated with respect by bandit, savage, ignorant squatter, and the refined and cultured officers of the Revolutionary army who settled in the wilderness. He lived to be an old, old man, beloved by young and old, and passed over the great divide telling about the glory he saw beyond.

You will understand better now why I have chosen Johnny Appleseed among all the officers to act as peacemaker in the camp, in the field, and on the playground, to prevent or adjust all quarrels among the scouts, and to decide any disputes that may arise during contests and games.

This is Johnny Appleseed's Day, for he is the one who is the chief officer of the celebration given by the Sons of Daniel Boone on Arbor Day. On this day Daniel Boone, David Crockett, Simon Kenton, Audubon, and Kit Carson all act as a committee, under the direction of Appleseed Johnny, to prepare for the ceremonies connected with tree planting.

If your Fort attends a school which observes this day, use your influence, and get your parents to use theirs, to have your members appointed by the school authorities to superintend the planting of the tree. If your members do not belong to a school or any other organization which celebrates Arbor Day, then you must take it upon your own shoulders to get up the celebration and enlist the interest of the parents and teachers in the scheme, and go to some gentleman in your town or district or neighborhood who is accustomed to public speaking, and ask him to make the address upon the occasion. You must first explain the objects of the Society of the Boy Pioneers, and tell him

that you stand for the preservation and the perpetuation of our native plants and trees, and you want him to give a bully, good rousing speech to excite the enthusiasm of the audience to aid and abet you in all your philanthropic undertakings. If you are in a small town or village, see if you cannot use your influence and have the fire companies or local militia turn out on that day; or if this is impracticable, you must get some one to provide a band, even if it consists only of a fife and drum.



Figs. 27, 28, 29.—The material for the litter

When your Fort grows larger you will probably have a drum-corps consisting of your own members. At the present time it is most imperative that the boys and young people should take an active part in the ceremonies of Arbor Day, because there are wicked and thoughtless men at present engaged in wasting and stealing the forests, with a reckless disregard of the consequences which must follow the destruction of our timber. These men, in their

thoughtless and selfish greed, forget that you boys are the ones who will suffer by their profligate waste of the natural resources of the country, and if they do not forget it they are even more wicked than we wish to think them, because they are wiping out of existence the natural inheritance which is due the coming generation, which has an inalienable right to an equal share of the benefits.

You know the old Bible story of the profligate who spent all his money and ended by herding swine. In this story it was the profligate who spent the money who had to attend the pigs; but in the case of the timber thieves, they propose to have all the fun of spending the money and allow you, the coming generation, to do the swine-herd act.

The best way in the world to stop these abuses is for you boys to thoroughly understand the question and take it into your own hands to start a reform. It is not so much the good the planting of one tree will do of itself as the effect of that act upon the minds of the observers. It teaches them that we want trees and we are going to have them, and we want good native American trees—if possible we want the kinds that are most intimately connected with the history of this country—so in selecting your tree to be planted on Arbor Day, give a preference to the black walnut, hickory, white oak, white pine, or some other tree that is now becoming rare. If, however, these trees are not obtainable, any good native tree will do, for we must plant a tree of some kind on Arbor Day.

Easy Trees

to get are elms, maples, and oaks. They can be found almost everywhere, and are as handsome as any trees you can find and not hard to transplant. If you select saplings from eight to ten feet high, they will be less liable to injury after they are planted. Arbor Day should be as it is in the early spring, for this is the best time for planting trees.

Planting the Tree

A cool, cloudy day is the ideal one for planting trees, but we must do it Arbor Day, even if it is warm and clear.

Have the hole dug deep and wide enough for the full spread of the roots. Keep the roots of your tree moist with mud, wrap around the mud ball containing the roots any old damp cloth or burlap, and remember that a minute's exposure to dry air will injure the delicate roots, which are the feeders to your tree.

Set the tree in the hole so that the roots will spread out naturally, and carefully shovel in fine dirt (loam soil). As the earth is shovelled in the hole, pack and work the dirt around the roots with your feet, and trample the earth down over the roots and around the trunk until the tree stands firmly upright.

Let the earth come up about the trunk a little above the former line of the earth's surface, that is, a little above where the earth came on the tree before it was transplanted. Make the last two inches fill of very fine soil and do not pack it, for the loose earth will catch and retain moisture.

In the Parade

on Arbor Day bring out all your prairie schooners, or emigrant wagons, which are described in the next chapter, and decorate them with bright-colored ribbons and flags.

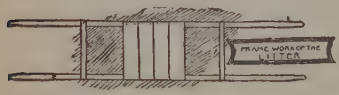


Fig. 30.—Framework of the litter

Supply each member of the Sons of Daniel Boone with a wand or bean pole, upon the end of which is tied a bunch of evergreen bedecked with a knot of gayly colored ribbon. Fig. 26 will show you how to make these wands for the paraders to carry.

The officers of the Sons of Daniel Boone should act as the pioneers of the parade and march in front of the Sons of Daniel Boone, each officer bearing a pick, spade, or shovel decorated with ribbons to represent the work they intend to do on that day in planting the tree; but Daniel Boone himself and Appleseed Johnny have neither wand, pick, nor shovel, for their proud burden is the tree which is to be planted.

The tree may be carried upon a litter gayly decked with flags and bunting; even the plant itself may have knots of ribbon tied to its trunk and branches and be supported by four bright-colored streamers attached to the handles of the litter, as shown in Fig. 32.

Fig. 31.—The litter

To make this litter, take two light but strong poles (Fig. 27) about eight feet in length; smooth off the ends of

the poles where the boys are to grasp them so that they will not hurt their hands. Connect the poles by a platform made of light plank (Fig. 29), and further strengthen it by two battens or cross-pieces (Fig. 28), and let these be about three feet long. Nail them securely in place (Fig. 30).

Fig. 32.—Arbor or Johnny Appleseed Day celebration

The roots of the tree have been surrounded with a ball of damp earth and wrapped in a piece of burlap to protect it. Outside of this burlap you may wrap flags or strips of bunting displaying the national colors.

I will not give any more minute directions in regard to decorating the float, or litter, because I know that I can trust the artistic sense of the boys themselves in making

these decorations. I will only caution you not to tie strings or cords about the tree itself so as to injure or scratch the bark. Broad ribbons will not hurt the tree, but small twine or cord is very liable to injure it. It is not necessary for the Sons of Daniel Boone to do the actual work of digging the hole and planting the tree, for if you have an expert workman to do that for you, one who understands tree planting, it will be better to allow him to do the hard work and give you a chance to devote your whole attention to the parade and the ceremonies connected with the affair.

Fig. 33.—Tally-gun

When you reach the reviewing stand, where the orator is stationed, let the boys form two lines and hold their wands, picks, and shovels at "present arms" to salute Appleseed Johnny and Daniel Boone as they bear the tree between the two lines of boys to the place where it is to make its home in the future.

You must use great care in planting the tree properly, because next Arbor Day each Fort who can report the tree they planted the previous season to be in a healthy and flourishing condition is entitled to cut a notch on their tally-gun.

The tally-gun is a wooden-gun or any

Unloaded

musket, rifle, or shot-gun which can be procured. This gun hangs upon the wall of the meeting-room, or "Fort,"

and is only taken down by Simon Kenton during meetings, and always saluted by the boys rising to their feet and giving the Daniel Boone cheer, after which it is again replaced upon its hooks on the wall. Whenever an official notch is won by the Fort, Simon Kenton, in the presence of the whole Fort, takes the gun from its rack, and when Daniel Boone gives the word Simon cuts a notch in the stock of the tally-gun with solemn ceremonies. Then it is again replaced upon the wall.

The diagram, Fig. 33, shows you a pattern from which you can draw a tally-gun on a piece of paper about two feet long. This is to hang upon the wall of your club-room or Fort. Whenever a member of your Fort or the Fort itself wins a notch, paste a seal made of red paper on the gun paper, as shown in Fig. 33. Put one ribbon to the seal for a notch, two ribbons to the seal for a top-notch, and three ribbons to the seal of the honor top-notches, a description of which will follow.

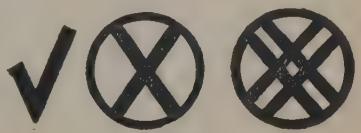


Fig. 34

You boys all know that it was the custom among the old pioneers whenever they took a scalp to cut a notch in the stock of their gun to commemorate the deed. In these days, however, we do not celebrate the taking of life or other acts of savagery. We will, however, keep the custom of cutting the notches, but our notches all stand for commendable deeds. Any boy who does an expert deed in woodcraft, athletics, natural history, forestry, or receives special commendation at school, may be voted a nick by

his Fort or club. Ten of these nicks will make a notch and ten notches will make a top-notch.

Diagram marked *A* (Fig. 34) shows how a nick is made, *B* shows a notch, *C* a top-notch. The higher honors are designated by adding a buffalo skull, the Indian head, the six-pointed star, etc., to the top-notch. These honors may be worn on the left sleeve of the coat or on the breast of your sweater, as shown in Fig. 35. The teacher or principal of your school, or the head of the shop or store where you work, may bestow these upon worthy subjects; or they may be bestowed by the club, association, Y. M. C. A., or the Fort of the Sons of Daniel Boone to which you may belong.

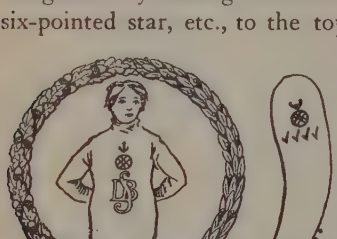


Fig. 35.—Wearing honors

The high honors are named after the distinguished gentlemen whom I consulted regarding the Society of the Boy Pioneers, and the ones bearing their names were selected by them personally. I went to Washington and saw

Mr. Theodore Roosevelt

at that time President of the United States, and received his hearty approval of the Society. He said he would be glad to help the boys in any way in his power, and designated the Roosevelt top-notch, to be given for "deeds of heroism and daring (not necessarily for the saving of life, but in which life-saving may be incidental), as, for

instance, in protecting women and children from injury or abuse; saving property from fire and flood, or in times of riot; or standing up to some noted bully or rough when the interests of peaceable citizens demand it, etc., etc."

Admiral Dewey

wrote me: "I have been much interested in what you tell me concerning the boys who are organized as the Sons of Daniel Boone." Very appropriately he selected the Dewey top-notch, for acts of heroism on the water and the saving of life. This includes also saving the life of those who break through the ice in winter time.

Major-General Bell

chief of staff, said: "I bespeak for your organization great success in the development of a wholesome and desirable manhood among the boys of our country." The Bell top-notch stands for feats of woodcraft; making a successful long journey in a strange forest; crossing streams too swift to ford; notable mountain-climbing; building a fire in the wet woods without matches, and notable feats of trailing.

The great and only

Buffalo Bill

Colonel William Cody, writes me: "I am very much pleased that the names of the old pioneers and scouts are to be kept fresh and green with the rising generation." Like Davy Crockett and Daniel Boone, Buffalo Bill gives us a motto: "Be true to yourself and others as the

Lord is true to you." The Buffalo Bill top-notch is for skill in pioneering: taking care of self and family in camp; building a log house with chimney, and roofing same; building wire fences, etc.; irrigating land; breaking wild horses to drive and ride; tanning and preserving the hides of wild animals; handling fire-arms with safety to self and comrades.

The great naturalist

John Muir

is also interested in our society. John Muir, after whom the big Muir glacier is named, is in sentiment a modern Johnny Appleseed, and his top-notch is for

True Lovers of the Wilderness

and to be bestowed upon any lad who lives two weeks or more in the woods, or who makes a journey of ten or more miles through the wilderness on foot and leaves a clean trail. By a clean trail is meant one on which there are no papers, tin cans, or rubbish strewn around camp or on the path by the camper or pedestrian, no living trees chopped or disfigured, and no blood of bird or beast spilled.

The winner of the Roosevelt top-notch is entitled to wear the insignia of the top-notch with the six-pointed star of courage on top of it for a crest. The winner of the Buffalo Bill top-notch wears the same insignia with the buffalo skull for a crest. The Bell top-notch has the Indian head for a crest. The Muir top-notch has the heart for a crest. The

Dewey top-notch has the anchor for a crest. Any boy who can win one of these top notches is a true buckskin knight, and his coat of arms and crest is of more real value and worth than any coat of arms handed down through his family from some old savage baron or profligate king's favorite.

CHAPTER III

GENERAL SIMON KENTON, THE BUCKSKIN KNIGHT, HIS DAY AND HOW TO CELEBRATE IT

OUR buckskin knight, General Simon Kenton, was born in Fauquier County, Virginia, on April 3, 1755, and died in Logan County, Ohio, of old age, in 1836. He was one of the most generous, lovable, mild-mannered, dare-devil pioneers of the old frontier.

The killing of the relatives of the great Mingo chief, Logan, and some other Indians by border ruffians brought on what is known as Lord Dunmore's War. When Dunmore reached Pittsburg with his band of Virginians, on his way to attack the Shawnees and Mingoes, he had with him some very great characters, among whom were George Rogers Clark, Kresap, Simon Butler (Kenton), and Simon Girty—the latter is the man who afterward became the notorious renegade but who at this time was a loyal and useful scout. I am telling this incident because it was here that Girty formed a warm attachment for the big, blond hero of our story; it was this friendship on the part of Girty which afterward caused him to rescue Kenton from the torture stake.

Colonel Bowman sent Kenton on a scouting expedition to an Indian town on the Little Miami River; along with Kenton were Alexander Montgomery and George Rogers

Clark—three as daring and brave men as ever wore moccasins. Their scouting expedition was successful, but the Indians possessed some fine horses and the backwoodsmen saw no occasion for walking home, so they captured seven horses and with them the three men started on a forced march to the Ohio River. The Indians soon discovered their loss and found no difficulty in following the white trail. When the three buckskin men reached the Ohio River they found that the river was not only high but that a strong wind was blowing and they could not force the tired animals to take to the water. They knew the Indians were on their trail; nevertheless they would not abandon the "critters," so the men staked out the horses and went into camp for the night. The next day the Indians overtook them, killed and scalped Montgomery, and captured Kenton, but George Rogers Clark got away.

The Indians have never been noted for their gentleness toward prisoners, and after kicking and pummelling Kenton until they were tired they forced him to lie down on his back, stretch his arms out full length, and after placing a stout sapling across his breast they fastened his wrists to each end with thongs of buffalo-hide. Next they drove stakes at his feet and fastened his ankles with thongs of buffalo-hide to them. Then they tied a halter around his neck and made the other end fast to a young sapling, and finished by lashing his arms and elbows to the stick which lay across his breast; thus he was bound "spread eagle," so that he could move neither head, hand, nor foot. In that position he spent the night. In the morning the Indians evidently thought that our hero must have become

stiff from his night's experience, so they devised the following plan to limber him up: First they bound his hands securely behind his back with buffalo thongs; then they mounted him upon a fiery, unbroken colt and lashed his feet securely to a thong that went under the belly of the horse. The animal had never been ridden before and

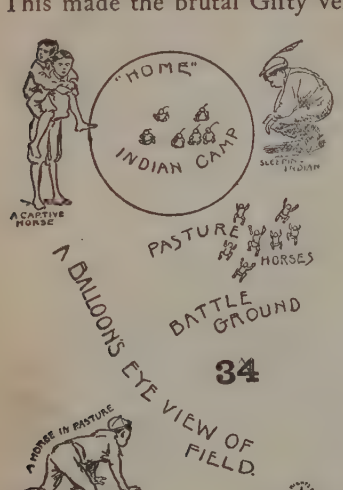
Simon Kenton's wild ride

objected vigorously to the burden, and, greatly to the delight of the "simple-minded red men," the horse went bucking, rearing, and plunging through the brush until, tired of its efforts, it fell in line and followed the other horses along the trail to the Shawnee village of Old Chillicothe.* Just

* Old Chillicothe, an Indian settlement near the present town of Xenia, Ohio.

before reaching the village the Indians came trooping out and gave Kenton another terrible beating, but our hero was a husky youth, six feet one inch tall, broad shoulders, as straight as an arrow, and without an ounce of fat on his body, and he tipped the scales at a hundred and eighty or ninety pounds, so while the mauling he received was very cruel and painful it did him no permanent injury; but, not content with inflicting this punishment, as soon as he arrived at the village the braves, squaws, and children armed themselves with sticks, clubs, switches, tomahawks, and knives, formed themselves into two lines facing each other, and between these lines Kenton was made to run. It was such a run as no half-back ever had. As he rushed along the lines of his tormentors each one tried to strike him. This was called running the gantlet. The wonder is that it was possible for a man to come out at the other end of the line alive, but he did, and ran the gantlet again at Piqua, and once more at Macachack; and again at Wapatomica he went through the terrible ordeal. In spite of all the ill treatment he had received, at Macachack he broke through the lines and almost got away. At Wapatomica (which was just below the Zanesville of to-day, in Logan County, Ohio) he came out of the ordeal bruised and battered. His face was now painted black, a sign that he was to be killed, but while the council was deliberating upon the manner of his death an Indian, John Ward, James Girty, and his brother Simon Girty, the notorious renegade, entered the council-room. They brought with them seven scalps and eight captives. Simon Girty threw a blanket on the floor and ordered Kenton to seat himself upon it. Naturally, Kenton

was a little stiff by this time and did not move with alacrity. This made the brutal Girty very angry, and roughly grabbing Kenton by the shoulders he slammed the poor fellow down on the blanket with a thud, but later when, upon questioning the prisoner, he learned that he was the Simon Butler with whom he had shared his blanket in Lord Dunmore's campaign, Girty's whole manner changed. Before the assemblage of astonished Indians Girty sprang forward and lifted the prisoner to his feet and gave him a grizzly-bear hug of welcome, after which, with the aid of the Mingo chief, Logan, and the French Canadian, Peter Druyer (then a captain in the British army), he not only saved Kenton from the torture stake but was ultimately the cause of his escape.



Simon Kenton, a Boys' Game

Choose three boys to act as Kenton, George Rogers Clark, and Montgomery. Divide the other boys up into two parties, one of which is to represent the Indians and the other the horses. Make a line to represent the Ohio River,

and some distance from that mark out the boundaries of the Indian camp. Outside the Indian camp pasture the horses. Let the Indians put feathers in their caps, to show they are Indians. Any Indian inside his camp is safe, and any one of Kenton's party on the other side of the Ohio River is safe. The horses' only safety is in their heels. To capture a man or a horse Kenton's party now sneaks upon the horses; but when they tag a horse the horse may neigh. As soon as the Indians hear the neigh of a horse they give a war-whoop and pursue the enemy.

If the white men are all captured the Indians form in two lines, each with a knotted handkerchief in his hand, and try to strike the prisoners as they dash through the line. If the white men are victorious the horses must carry the white men on their backs. (See Fig. 36.)

Now that you are a full-fledged pioneer you must emigrate; all the pioneers emigrated and continued to emigrate until they hit the broad trail across The Great Divide, where all pony tracks point one way, and in all their emigrations but the last one they used a wagon which was later called

A Prairie Schooner

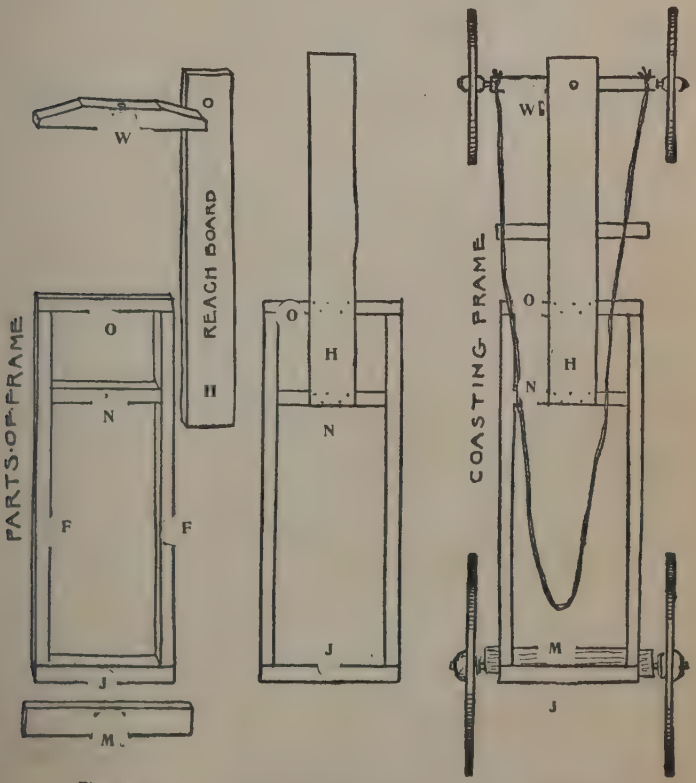
in which to "tote" their duffle, plunder, or dunnage (as they were wont to call their belongings) from the settlements to the backwoods. With us the "backwoods" must be the nearest open space, common, field, wood, or park, but we must have real canvas-covered wagons for our use such as the old pioneers used in their wanderings. If you are only playing pioneer for a little side fun, or belong to one of the clubs called a Fort of the Sons of Daniel Boone, it is

all one and the same thing—your crowd, gang, or club must have its leaders—so, before you start on the first excursion, decide upon one boy for Daniel Boone, one for Simon Kenton, one for Davy Crockett, another for Kit Carson, and one more for Johnny Appleseed. For the first spring camp the boys must select an afternoon or a Saturday

The First Spring Encampment of the Boy Pioneers

on which to cook their first meal out-of-doors. If the country is too far afield they can use some vacant lot or the back yard of some fellow-scout. Johnny Appleseed must get his mother or some one to teach him how to cook eggs, bacon, or some simple sort of dishes suitable to the occasion, and also how to make a pot of tea, coffee, or other warm drink, so that he may act as cook. Simon Kenton's duty is to build the camp-fire. Crockett and Kit Carson must see that

there is an ample supply of wood, Audubon may act as cook's assistant, while Boone arranges the wagons and takes



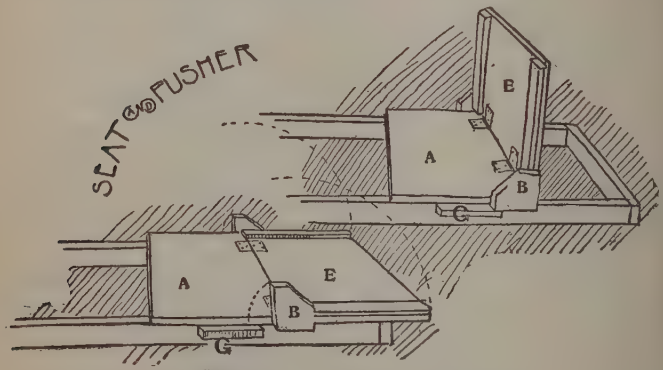
Figs. 37 37A 38

The Body of the Prairie Schooner

general charge of the camp, keeping a careful lookout that no savages surprise the scouts and rob them of their dinner.

How to Make a Prairie Schooner

Take two pieces of two-by-one-inch wood, each four feet two inches long (*F* and *F*, Fig. 37), and of the same material, two pieces, *J* and *O*, each fourteen inches long; nail *J* and *O* to the two ends of the *F* pieces, as shown by Fig. 37; then



Figs. 39 40
The Flushing Pusher in Its Two Positions

cut the piece *N* so that it will just fit between the *F* side pieces, and nail it in place, one foot from the outside of *O*. Next take a piece of plank, *H*, for a

Reach-Board

and nail it securely to *N* and *O* across their centres. (Fig. 37A.) Bore a hole near the end of the reach-board for a king-bolt, and also a hole in the axle (*W*, Fig. 37) to correspond to the hole in the reach-board. Nail the rear axle, *M*, to the bottom of the *F F* side pieces, placing it about one inch from the inside of *J*, as in Fig. 38.

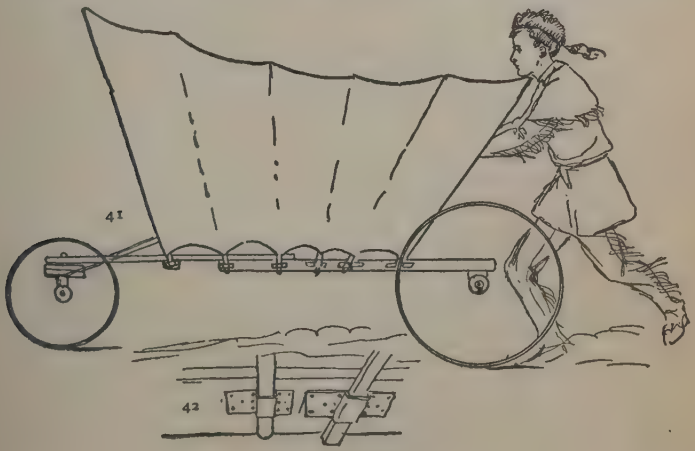
Next a pair of

Baby-Carriage Wheels

must be secured for the front and a pair of larger wheels for the rear. Fasten the axles which come with the wheels to the bottom of *W* and *M* and you will have the framework (Fig. 38) of

A Coasting Cart

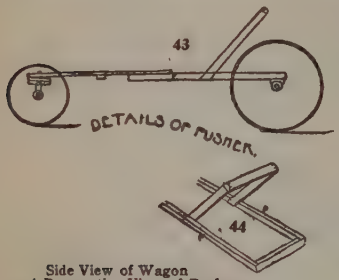
To use this there must be a seat of some kind for the coaster or steerer to sit upon, and Figs. 39 and 40 show



On the Way to Camp

how to make a push seat. *A* is a board seat; *E* is another piece of board hinged with flat iron hinges to *A* and strengthened by two battens at each edge; *B* is a stilt-block fastened by screws securely to the side of *E; G* is a cleat nailed to

the *F* pieces, so that when the lid *E* is up, as in Fig. 40, the *B* blocks will rest on the *G* cleats. The dotted lines in Fig. 39 show how the *B* blocks turn up with the lid *E*, and Fig. 40 shows them resting upon the *G* cleats.



Side View of Wagon and Perspective View of Pusher

The advantage of this push device is that when you come to go down a hill the boy who has been pushing can let *E* down, as in Fig. 39. It then becomes a coaster, and the boy jumps aboard and rides downhill, while the driver steers with the lines attached to the front axle.

To transform this wagon into a prairie schooner it is necessary to secure a number of hoops—that is, pieces of

Fig 45.—The Push-cart under Full Power

thin elastic wood which can be bent into loops from one side of the wagon to the other, and thus form a support for a cover made of unbleached muslin, old sheeting, or tent cloth. (Fig. 41.) Fig. 42 shows how to fasten the hoops with pieces of tin.

As a coasting cart these wagons are of every-day use, and as a prairie schooner they are serviceable for parades, and for "toting of duffle" to and from the camp.

Fig. 43 shows a side view of a push-cart with a stationary pusher (Fig. 44) nailed to the side bars *F F*, and Fig. 45 a push-cart under way. For just an every-day push-cart or prairie schooner the last device is the best for the reason that it is very simply made.

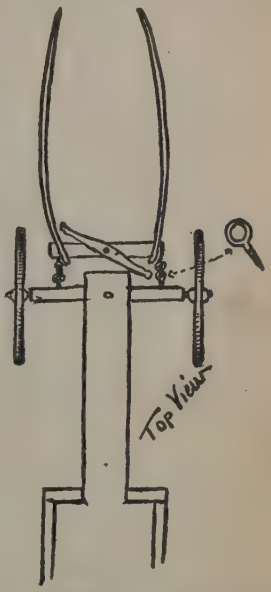


Fig. 46.—Showing How to Attach Shafts

Movable Camp

The prairie schooner makes a good movable camp, and there is plenty of room for one boy to sleep under the canvas, upon a bed made of a couple of boards and some blankets.

If you or any of your friends are the proud possessors of a goat or big dog which can be trained to travel in harness,

Shafts

may be attached to the front of the wagon by means of four screw-eyes, as shown in Fig. 46. These shafts can be removed at any time and put away by simply unlashing the string or thong which holds them.

While we are on the subject of wagons, we must not for-

get to build one of those queer wagons that are used with sails. Here, then, is the Sam Houston

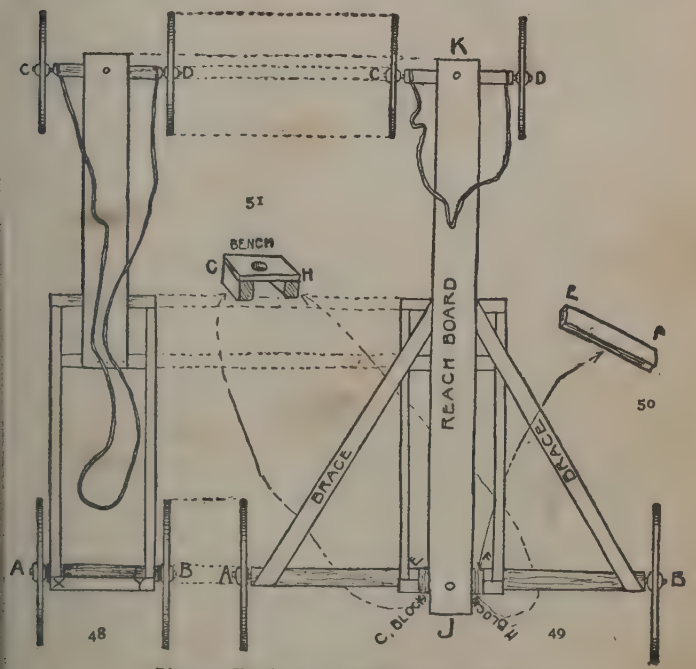
Land Boat

This sail wagon (Fig. 47) was named after General Houston because it is described here upon the request of

Fig. 47.—The Sam Houston under Full Sail

some of the boys down in Texas; and General Houston, you remember, was the great Texan hero. The boys from the Lone Star State have written to me and told me about their prospering Forts of the Sons of Daniel Boone down there, "but," said they, "we have no snow or ice here, and we think that you devote too much space to winter sports for Northern boys." Of course, the Northern boys must

have their winter sports, and it is the duty of the Founder of the Sons of Daniel Boone to help them out in it. At the same time he will not neglect all those loyal scouts



Diagrams Showing the Construction of a Land Boat

down South, and so he has devised the Sam Houston land boat for the open country. This boat will do for Northern roads as well as Southern prairies. Build your framework as you did for the prairie schooner and the coasting wagon, as shown in Fig. 48, but, unlike Fig. 48, you must make the

rear axle much longer than is shown in that diagram, and then the stern of the wagon becomes the bow of the boat (Fig. 49). Brace the axle as shown in the last diagram, and make a bench as shown in Fig. 51 into which you step the mast. Make a hole in the reach-board to receive the butt of the mast and one in the bench a little back of it so as to give the mast a rake, as shown in Fig. 52. Figs. 53, 54, and 55 show two sorts of tillers or steering apparatus, or the boat may be steered with ropes as you do with the coasting cart. *E F* (Fig. 50) is a block of wood made to fit over the axle to bring the surface up even with *X Y* of Fig. 48 so that the bench may rest upon an even surface. Fig. 47 shows the Sam Houston under full sail. The advantage of this craft is that it can make good time on the roads, on the hard, sandy beaches of the ocean just below high tide, and is an excellent traveller on ice or any other hard surface. If you use bicycle wheels on ball bearings you will, of course, gain greater speed.

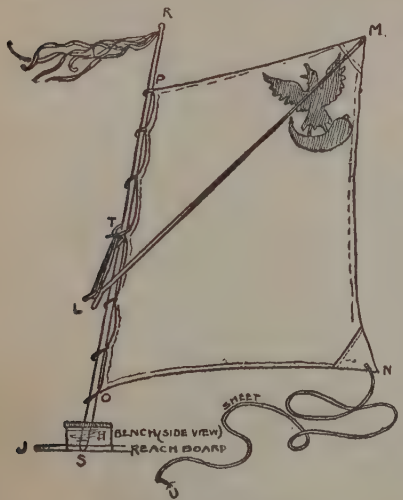
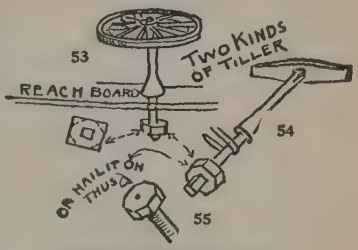


Fig. 52.—Sail for Land Boat

Any one of the wagons described are as good for the sunny South as for the frozen North, and most all of the pioneer games hereafter described may be played upon the prairie as well as upon ice and snow.



Details of Steering Apparatus

In the days of Daniel Boone the old backwoodsmen were lucky if they owned a pack-horse and rich if they possessed a prairie schooner, but an automobile would have frightened them more than did the whistle of the first river steamboat that ploughed its way down the Ohio and Mississippi Rivers among the shifting sand-bars, "sawyers," and snags. We, the Sons of Daniel Boone, however, live in a new age, so it is proper and appropriate that we should have all modern out-door devices, and the next chapter tells how to build the latest, up-to-date, cup-winning pushmobile, and after you have built the pushcart land boat and prairie schooner, it will be easy to make the pushmobile, which follows in natural sequence.

CHAPTER IV

SIMON GIRTY, THE RENEGADE—GAME OF RENEGADE —HOW TO BUILD A PUSHMOBILE

IN this chapter we are going to learn how to make a pushmobile. Just what a pushmobile has to do with pioneering it might be hard to explain, but the preceding chapters have given part of the evolution of the little coasting cart that every city boy knows how to make, and the pushmobile has been evolved from the primitive coasting wagon, so it naturally takes its place here. In fact, if it were left out, the boys, having been led so far in the wagon-maker's art, would miss the pushmobile and be flooding the author with letters demanding an explanation and reason for omitting it from this book.

So here it is in all its detail. But first and beforehand, that this chapter shall not be lacking in backwoods flavor, we will have a short account of a notorious American who, although he at first won honorable notches for his gun-stock, also won so many bad marks that the notches are forgotten and lost.

Every Son of Daniel Boone should be familiar with the story of Simon Girty, so that he may avoid any act which would give occasion to his companions for giving him that name.

Boys who give away the secrets of their clubs or societies to outsiders, boys who join a club or Fort of the Sons of Daniel Boone and then desert it, are called Simon Girtys. Although the Society was founded by the author four years ago, so far there has been no

reported; but some boys do not seem to have a fair chance in this world; their surroundings in childhood and boyhood are such as to give them a wrong impression of life. These surroundings often serve as a kindergarten training for evil in place of good. There appears, however, to have been nothing remarkably bad about Simon Girty's father, and from all accounts his mother seems to have been a very estimable woman. Thousands of just such people inhabited our old frontier and their children and descendants often made the best type of American citizens.

Simon Girty, the renegade, Simon Girty, the savage, was the son of old Simon Girty, the packer, an Irishman who drove pack-horses through the wilderness and saved enough money from his wages to start himself as an unlicensed Indian trader. He married an English girl by the name of Mary Newton and they had four children—Tom, who was the eldest; Simon, born in 1741; then came Jim in 1743 and George in 1745. In 1748 old Girty became a regular licensed Indian trader. The four Girty boys were good, wholesome children and under proper conditions might have become fine types of men, but they lived in the most notorious of backwoods settlements, known as Chambers-in-Paxtang, now known as Fort Hunter, in

Dauphin County, within walking distance of Harrisburg, Pennsylvania.

Chambers-in-Paxtang was a place where the whites and Indians had many boisterous revels. One day old man Girty became quarrelsome and was killed by "The Fish," an Indian. According to the unwritten law of the back-

Old Simon Girty, the Renegade

woods it was the duty of the dead man's dearest friend to continue the quarrel. Old Girty's most intimate friend was a fellow named Turner, who lived in the same house with Girty. Turner, upon the first opportunity, killed "The Fish," after which he married Mrs. Girty and thus became the stepfather of Simon and his brothers Tom, Jim, and George. But the old backwoods law was still in working order and some time afterward the Indians

captured Turner and his family, and then in the presence of his wife and children they subjected him to horrible tortures and finally took his life.

Such was the kindergarten training which young Simon Girty received, and it is not strange that he grew up to be more savage than the savages and became a cruel, unprincipled man, a traitor to his country, a renegade and leader among our Indian foes, a coarse, low type of a Benedict Arnold—the most hated man on the border. There is no doubt about his treachery and blood-thirsty cruelty or that he led the red man under orders from the British, yet he was not totally bad at heart, for he was true to his former comrade, Simon Kenton, and showed kindness to other prisoners, but to personal enemies he was brutal and cruel in the extreme. Many of the stories and legends about him are untrue, and outrages and acts committed by other people have been laid at his door; still the fact remains that during the Revolutionary War, after first enlisting with the Americans, he went over to the British and was used by them as interpreter, scout, and also for the purpose of leading and inciting the Indians against the American settlers. He was present at the terrible torture of Col. William Crawford, and, if he took no part, he made no effort to help him. He threatened and used most terrible language to the captive missionaries. Girty led a number of forays, scalping the white settlers after the manner of the Indians, and wreaking a most terrible vengeance upon his former neighbors.

Girty was a brutal character. He could see women and children killed without disturbing his tough conscience,

and could even take part in the forays where these acts were committed, and it is not improbable that he himself had a hand in them. But he was not always unkind. On one occasion he patted a boy prisoner on the head and took him on his knee, as I have seen even a low type of criminal do. Neither was he always profane and threatening in his language in the presence of prisoners, although he seldom went out of his way to be kind to them; but as a rule the boy prisoners were better treated by Girty than any others, and this may have been because he himself remembered the time when, a little fellow, a prisoner among the Indians, he was compelled to witness the terrible scenes when white captives were brought in.

According to the written and verbal accounts that have come down to us, Simon Girty looked his character. He had very dark hair, dark eyes, a livid scar on his forehead, a short neck, and a heavy frame. He was by no means an Indian in character. He was much worse than the savages, for he lacked their many noble traits. Girty was simply a mean type of a very bad white man. He is described on various occasions as being dressed as an Indian, but this was, probably, not his usual custom. We must remember that in those days all the backwoodsmen wore practically the same garb as the savages, omitting, of course, the feathered head-dress, which was replaced by the white pioneer's bearskin and coonskin caps. Girty sometimes wore a brace of silver-mounted pistols in his belt, which were probably furnished him by the British.

He was an excellent hunter and woodsman. At times he became very abusive, quarrelsome, and noisy.

We must remember that Simon Girty was by no means one of the buckskin knights of American chivalry. He is the villain in the story of these old times, and, because his name is mentioned so frequently in story and legend, it becomes necessary to give a short account of him along with those of our grand old pioneers, for he lived at the same time as Daniel Boone, Simon Kenton, and Jonathan Chapman, affectionately known on the border as "Appleseed Johnny." (This brief sketch of Girty is useful, if for no other purpose than as a shadow, or dark side, of a picture, which is always necessary to give greater lustre to the high lights.)

After the war of the Revolution was over Girty went to Canada and settled there. He was not killed in war, as many of the accounts declare, but lived to be a half-blind, rheumatic old man, and at length died, in Canada, from natural causes, February 18, 1818.

Game of Renegade

Choose up and divide into two sides Indians and whites. Have a camp for each where all are safe and a field between where captures can be made. Each hat counts a scalp and a boy without a hat is out of the game.

Before the game begins put a number of pebbles in a hat and one piece of coal or black stone. Let each white man draw a stone, look at it privately, and put it in his pocket. The one drawing the black one is Simon Girty, but he must keep it secret and at first play on the side of the whites, but as soon as a good opportunity comes he can grab the caps of some whites and desert to the Indian camp. The

side capturing the greatest number of scalps is the winner.

Now for the pushmobile; and since we are living in the age of flying-machines, telephones, electric railroads, subways, and all sorts of wonderful things, even pioneers must use these modern contrivances once in a while and I myself have seen an automobile full of painted and feather-decked savages, so why not a Kit Carson

Pushmobile

The pushmobile, which has in certain cities been attracting the attention of the public and has also become a thing of absorbing interest to the small boys, is an invention of the small boys themselves.

The young inventors took their simple coasting wagons and transformed them into pushmobiles, displaying in their work both ingenuity and mechanical skill of a high order.

Some of the youngsters imitate all the peculiarities of real automobiles in their playthings; they fill an old oil-can with dry rags and leaves, set fire to them, and their pushmobile makes as much smoke with as objectionable an odor as the real racer. Other boys have a piece of tin so attached to the machine that it hits each spoke of one wheel as the latter revolves, making a noise so closely resembling an automobile as to startle timid pedestrians when crossing the streets.

Each pushmobile has a driver (pilot) and a mechanician (pusher). At the last Vanderbilt Cup Race at Flushing, Long Island, there were twenty-two of these queer machines entered, and almost all of them were painted a dull gray or lead color like the big automobile racers. The "coolers"

on some are made of bent wood, some of tin, some of cloth stretched tightly over a frame, others have a big oil-can or a keg on the front to represent the cooler, and almost all have the front of the cooler so painted as to look like the grating in the front of a real automobile. A few have wire-screen fronts, and many, in imitation of the big machines, carry an extra wheel behind or in front.

The races for the silver Vanderbilt Cup are attended by a large crowd of grown people, and the big newspapers are all represented by their reporters busy with cameras and pencils to make reports of the event. According to the newspaper reports:

Flushing's first pushmobile race, on Saturday morning, November 17, 1906, was a greater success than the promoters of the event anticipated. The fact that the grown people had encouraged the contest by a substantial contribution toward a prize silver cup added zeal to the contestants and also was responsible for much of the crowd which assembled at the course before seven o'clock yesterday morning.

Fourteen contestants took part in the race. The course was four and a half miles, being ten laps around the square bounded by Murray, Amity, and Botanic Streets and Broadway. The start was made at Murray Street and Broadway at seventeen minutes past seven o'clock. It was well done, all the boys getting off in good shape and being loudly cheered by the spectators. Paul Baumeister and M. Boyajian were the judges.

Car No. 11, driven by Harry Brown, Jr., and Austin Lawrence, shot across the tape of the Murray Hill pushmobile course at Flushing yesterday, winner of the Vanderbilt Cup for 1906.

The course was ten times around a city block, one and three-fourths miles in length, and the winners did the distance in twenty-seven minutes and twelve seconds.

Car No. 1, driven by Bondfelder and Rhinehardt, of College Point, finished second, five minutes later. The rest of the fourteen starters trailed along for the next half-hour.

One hen, a cat, and a yellow dog were injured by the flying cars, but it is believed that another contest will be held next year.

The start was made at eight o'clock in the morning, the cars being sent away two minutes apart. All of them finished, although one lost a baby-carriage wheel in taking one of the street corners too fast.

When it was over the thirteen-year-old president of the Murray Hill Pushmobile Club sent this telegram to William K. Vanderbilt, Jr., who donated ten dollars for the cup:

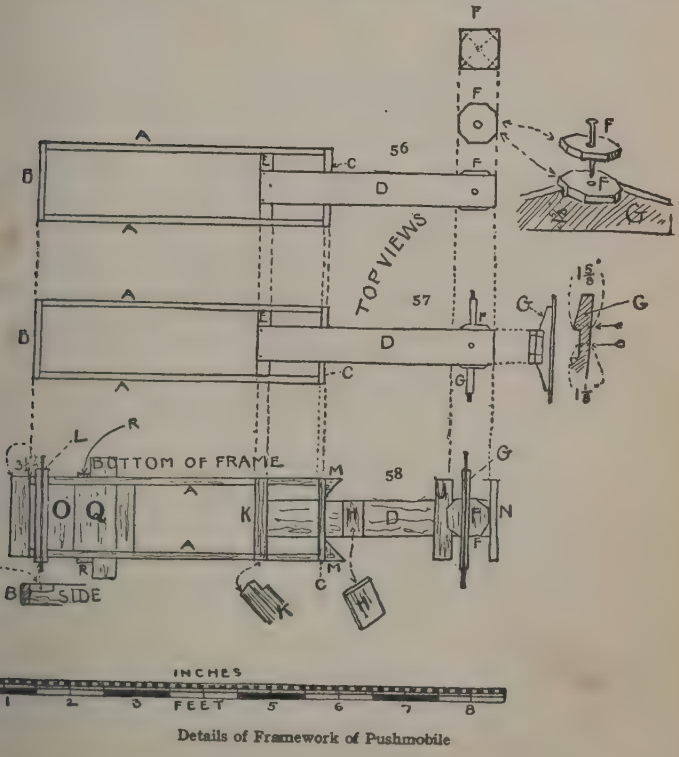
"Race a great success. Wish you could attend banquet to the winner to-night. PAUL TOWNE."

Select oak wood one inch thick by two inches wide and cut out the pieces *A*, *A*, *B*, and *C* (Fig. 56). Make *B* and *C* each fourteen inches long and fasten the frame together as in Fig. 56. Then take another piece, *E*, of the same materiial and cut it to fit between the side bars *A* and *A* and fasten it with screws at a point just one foot from *C* (Fig. 56). Next saw out the reach-board *D*. Let it be of pine, one and one-quarter inches thick, five and one-half inches wide by two and one-half feet long (*D*, Fig. 56).

For the seat use a pine board seven and three-quarter inches wide, twenty-one inches long, and saw two pieces from the rear end so as to leave a projection on each side four inches wide (*Q*, Figs. 59 and 60). Then to this add the piece *P* three inches wide.

The coaster and pusher. *O* (Figs. 59 and 60) is hinged with a couple of flat iron hinges. To strengthen the pusher

couple of cleats or battens are fastened with screws to ach side, as in the diagrams. To prevent the pusher from olding over and prying off the hinges, cut two stilt-blocks

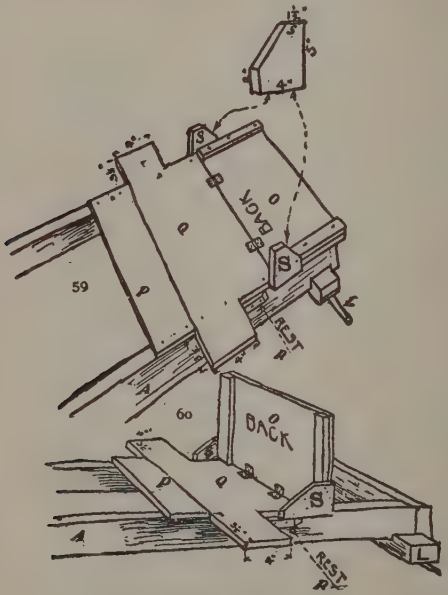


Details of Framework of Pushmobile

Figs. 59 and 60), fasten them to the sides of the pusher so that when the pusher is up (Fig. 60) the *B* blocks will t upon the "rest" cleats *R* (Figs. 59 and 60).

The front wheels are sixteen inches in diameter; the rear eighteen inches, and must be stronger than the front.

The steering-wheel is made of a toy wagon's wooden wheel, but this of itself is not strong enough, and to add

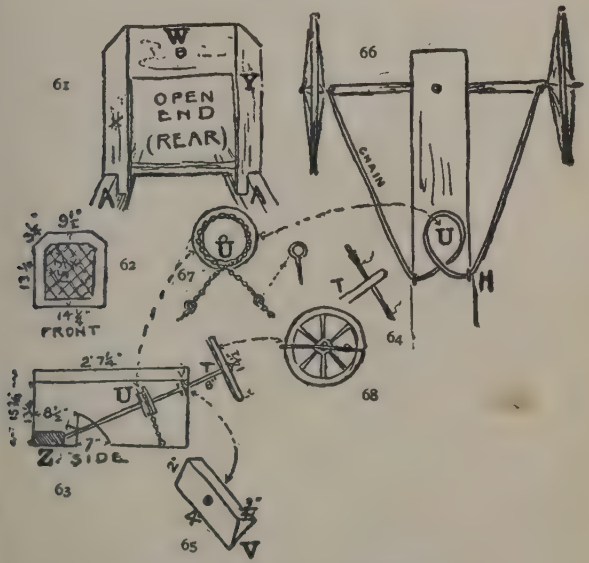


Details of Folding Pusher

strength, as well as to keep it from turning on the shaft, run a small iron rod (Fig. 64) through a hole bored through the shaft, and fasten each end of the rod to the spokes of the wheel by binding it with a piece of copper wire (Fig. 68). The cooler is made of galvanized sheet-iron bent over a

wooden frame (Figs. 61, 62, 63, and 69), and in it is the steering apparatus, shown by the X-ray view (Fig. 63).

The front wheels work upon an iron axle which comes with the wheels, and this is bolted to the wooden axle *G*,



Diagrams Giving the Parts of a Pushmobile

hown in Figs. 57 and 58. The wooden axle turns on a air of fifth wheels, *F*, secured by a pin or king-bolt, which ts in a hole in the reach-board *D* and runs through the fth wheels and down into the wooden axle. Bore the ole for the pin and drop it in; it is not necessary to fasten it here. To make the fifth wheels saw off the corners of a quare piece of one-inch board; make it seven inches in

diameter, *F* (Figs. 56, 57, and 58), cut a notch one-half inch deep and seven inches long in the top of the wooden axle *G*, and fasten one of the fifth wheels to the axle with screws in such a manner that the hole in the axle fits the hole in the centre of the wheel; the other fifth-wheel is loose and is held in place by the king-bolt.

The hind wheels also have an iron axle, which is bolted by three bolts (*L*, Fig. 58) to a wooden axle made of a two-inch by three-inch piece of pine (see *L* in Fig. 58). The other parts of the framework consist of stilt-blocks *M* and *M*, the pieces *H*, *J*, and *N*, a spreader and a wooden frame for the front and rear of the cooler-box. Fig. 61 shows the rear frame of cooler; there is also a top piece in front, but the front frame is smaller than the rear end of the cooler. The steering-gear consists of the wheel (Figs. 68, 63, and 69), a wooden shaft turning in a socket-hole in a wooden block (Z, Fig. 63) and supporting a spool, *U*, five inches in diameter (Figs. 63, 66, and 67), around which the chain *K* is looped, as shown by the diagram (Fig. 66). The ends of the chain run through screw-eyes in the sides of the reach-board over the block *H* (Fig. 66), and thence to the wooden front axle, where the ends are fastened by screws run through the links of the chain. Fig. 66 gives detail of the loop of the chain, showing its arrangements.

Fig. 69.—Cup Winner and Crew

The chain is fastened to the top of the spool *U* by a

screw; the part of the chain on the left-hand side of the spool crosses the part on the right-hand side in such a manner that the left-hand chain is attached to the right-hand side of the axle and the right-hand chain to the left-hand axle.

Make the spool of one-inch pine board and the flanges of one-half inch. Cut them like *F* (Fig. 56), then whittle off the corners until they are wheel-shaped.

A hole is bored through the rear frame of the cooler-box (Fig. 61), at a point, *W*, midway between the two sides and about three and one-half or four inches below the top, through which the shaft is run to the socket hole in the front block *Z;* a hole also runs through the wedge-shaped block *V* (Figs. 63 and 65), which is screwed to the inside of the front frame of the cooler and shown in the X-ray view (Fig. 63).

On each side of the cooler, eight and one-half inches back of the front, two deep notches are cut in the sheet-iron seven inches high and seven inches wide at the base (Figs. 63 and 69), to enable the wheels to move freely when turning sharply to one side or the other.

This pushmobile, when all finished, should weigh fifty-seven pounds and not cost more than two dollars and fifty cents.

The driver sits in the car and steers, the mechanician runs behind and pushes until he comes to a down grade, then he jumps aboard and rides.

CHAPTER V

AUDUBON'S DAY—HOW TO RIG A HOUSE-WAGON FOR BOYS

Don't forget Audubon's Day, the 4th of May, and do not fail to turn out in force and put up bird-boxes on every tree, shed, and barn within reach.

AFTER you have made the prairie schooner, the coasting wagon for running down hills, the pushmobile, and the sailing wagon, you will probably grow ambitious and want to try something on a larger scale. Of course I am writing for boys of all ages and some of the older boys I know would like to take a vacation in a moving camp which possesses the same advantage as the shell of a snail, it is always with you. With a house-wagon you can spend a most delightful vacation, living the out-door life of a gypsy. If you are too young to go alone on a trip of this kind, I assure you it has fascinations for any normal, healthy man, and you may induce your big brother, your uncle, or even your father to go with you, and they may take my word for it they will never regret the time they spent playing gypsy in a house-wagon.

Those beautiful summer days in the open fields, the free and independent life, the visions of the flapjacks and the aroma of the coffee, will always remain in their memory as a sort of green oasis in the desert of their business life.

You just tell them this, boys, and picture up the delights of the camp-fire and the scenery and all that sort of ning and enlist them on your side. Then show them the lans and directions, telling them how they can do it. There no denying the fact that living in a house-wagon, comining as it does the delight of camping with the pleasure f travelling, is one of the finest ways in the world of having

Fig. 70.—Off for a Vacation

un in the summer, and is within reach of many boys. Of ourse, there will be necessarily some expenditure, but if conomy and forethought are used, and the expenses divided p among the crowd, it will make a cheap outing, and the nger you stay the cheaper will be the rate per day, because ractically all expense occurs in the original outlay. After ou are on the road or in camp there is little opportunity spend money, even if you so desire.

For the boys who cannot go on the road there is still lenty of fun. It is not even necessary to spend a cent in rder that a small boy may have fun camping in a wagon.

Neither is it necessary to own or hire a horse, because the camp need not be movable.

If you have an old wagon in the back lot, a tent may be made over it by erecting a pole at each end, fastening a

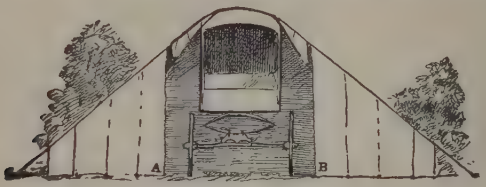


Fig. 71
Front View of Side Tents for Camp Wagon

line across, and then throwing across it a piece of canvas, carpet, oil-cloth, or any "old thing" which will serve for a protection from the sun. A box under the wagon seat can be used to conceal your camp "duffle" when you are not at home.

The bodies of the house-wagons built in England (Fig. 70) extend out over the wheels sufficiently to give room

Fig. 72
Perspective View of Side Tents for Camp Wagon

for two bunks, one above the other, set crosswise at the end of the wagon. These wagons also contain a stove,

table, and library, and are often fitted up with solid polished mahogany trimmings and furniture; but they cost a great deal more money than, I am glad to say, most American boys have at their command, for the boys with money enough to buy such an outfit are not the kind of boys that would ever enjoy using it. In Jersey there is a man who builds cheaper wagons for the gypsies, but these are also beyond the reach of the ordinary American boy. There are, however, many

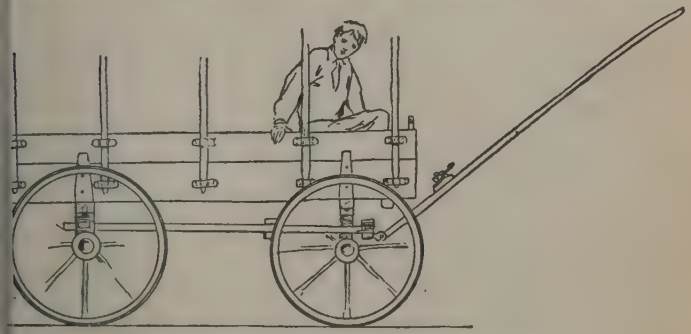
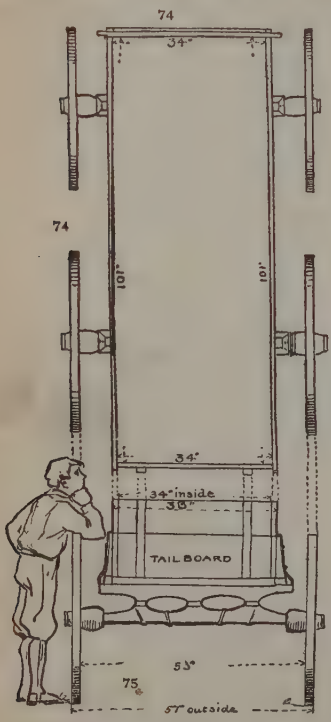


Fig. 73.—Diagram Made from a Common Farm Wagon

readers of this book who can readily procure a horse and wagon for a summer outing. All that is wanted of the horse is a cheerful disposition and strength enough to pull the wagon over the country roads, and all that is wanted of the wagon is a running gear and body sufficiently well put together to practically do away with the chances of breaking down.

Fig. 71 shows an ordinary grocer's covered delivery wagon, the front-end view with the shafts removed to simplify the diagram. It is flanked upon either side by

a lean-to tent, the front flaps of which meeting over the roof inclose the wagon and make a big, roomy camp. An arrangement of this kind gives the privacy of an upstairs bedroom to the upper part of the wagon and a roomy down-stairs bedroom as well. Fig. 72 shows a perspective view of a wagon arranged in this manner.



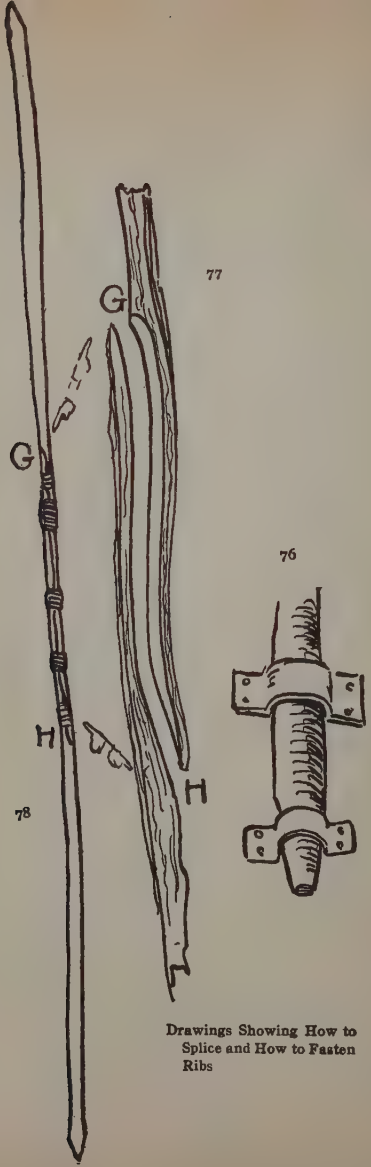
Top and End View of Farm Wagon

In arranging these side tents for a wagon it is necessary to have an extra piece of canvas to cover the top of the wagon and lap over the ends of the tent cloth, otherwise in stormy weather the rain will come down the sides of the wagon into the wing tents. In the first diagram (Fig. 70), I have shown the tents rolled upon the side of the wagon, and in Figs. 71 and 72, pitched ready for camp duty. In each case there is a flap attached to the top of the wagon which covers the upper edge of the tent; but this flap is not to be found on all covered wagons, and where it is absent it will be necessary to use a top cloth

or tarpaulin sufficiently large to lap over the tent cloth five or six inches.

We will suppose that the only wagon procurable is a common, wooden, springless, one-horse farm wagon, as represented by Fig. 73. Fig. 74 shows a top view of it and Fig. 75 the end view of the same. This is not an imaginary wagon, but a real one that I found standing in a country road and from which I made my drawings on the supposition that it was a typical wagon of the kind. The dimensions, as you may see by referring to the diagram (Fig. 75), are thirty-four by one hundred and ten inches, inside measurement. This would make it rather close quarters for two to sleep side by side if the campers were at all restless, but on a pinch four could sleep in the bed of the wagon—two with their heads at the tail-board and two with their heads at the dash-board, allowing their feet to overlap each other in the middle; but for comfort there is only room in the bed of the wagon for two men, one to sleep with his head at the dash-board and the other to sleep with his head at the tail-board. It is supposed, however, that our gypsy family will be composed of more than two individuals, and it will be necessary to provide sleeping-room for the others outside of the wagon bed.

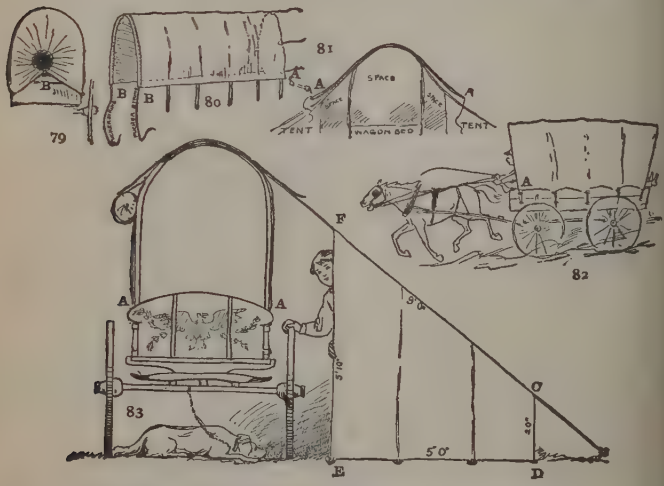
First, we must make a top to the vehicle. It is necessary to have clamps of some kind on the side of the wagon to hold the ends of the ribs of the wagon top (Fig. 76). These can be made at the blacksmith-shop, or may be made at home by hammering a piece of sheet iron, or even a piece of tin, into the proper shape to fit the ends of the sticks. You will need on this wagon about five ribs, one at each



Drawings Showing How to Splice and How to Fasten Ribs

end and three in the middle space (Fig. 73). If you are in town where you can get milled lumber, of course it will be better to have flat ribs for your wagon top, but if you are in the country where the farm wagon belongs, you must take your hatchet and go out and cut a number of hickory or ash saplings with which to make the ribs to support the top. If the saplings are long and strong enough you can put the butt in at one side and bend the top over to the opposite side and then reverse the next one, but this will probably not be practical, and you will get a more symmetrical curve by taking two saplings for each rib. Select two young trees that are about the same dimensions and small enough to be elastic and large enough to be strong. With your knife or with a draw-knife shave off the small ends of these sticks, as in Fig. 77, and then lash them together, as in Fig. 78. Trim off each butt end, as in Fig. 76, so that they will slide into the lower clamp but not through it. The upper clamp should be larger than the lower one, allowing the sapling to slide down freely through it. After all the ribs are in place the wagon may be covered with canvas, as were the old pioneer wagons or the prairie schooners of the West. Fig. 79 shows rear end with the pucker string, *B*, drawn. Fig. 80 shows cover with loose pucker string, *BB*, and also lash strings in front. To plan the tents for this or any other wagon, draw a diagram on a scale, as Fig. 83. That is, measure the height of your wagon from the ground to the top of the ribs, which latter are in this case supposed to be five feet six inches above the bed of the wagon. Then take a ruler and pretend that each inch on the ruler represents a foot, and measure the distance on a piece of paper and

make a dot for the height of the wagon. In the same way measure the distance between the wheels and the wagon bed and sketch it in according to the inches on your ruler. Then allow on the ground on each side room for yourself to lie down and be under shelter, and draw an upright line,

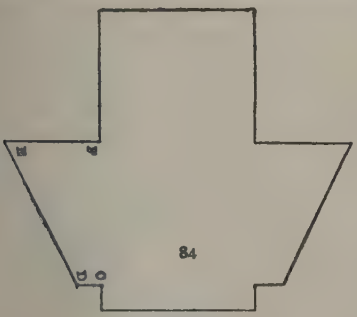


Sketches Showing Construction of Wagon Covers and Side Tents

D C, twenty inches high; next draw a line from the top of the wagon to *C*, and continue to the ground. This will represent the top of the tent. The stay-rope from *C* is fastened to a peg at the back. In this way you can easily plan a tent to fit any sized wagon.

For the one we have been describing it would take a tent nine feet long on top, including the front flap, five feet

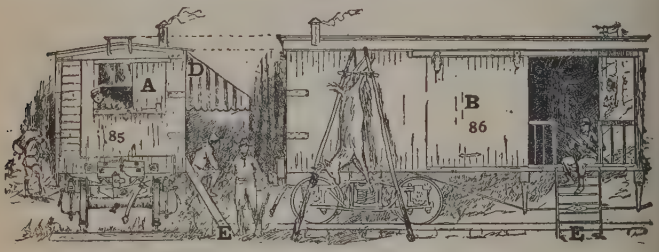
ten inches high at the longest edge of the side piece, twenty inches high at the smallest end of the side pieces, and five feet on the ground-line of the same piece; the width of the tent would be the length of the wagon, a little over eight feet, but it is not necessary to have a tent this wide unless you have a large party; any ordinary width will answer your purpose. Fig. 84 shows the pattern of the tent before it is sewed together. If you have an open wagon with too narrow a bed you may extend the wagon by running girders across each end so that they will protrude on each side, and putting brackets in the middle, one on each side of the wagon, and then fastening planks along each side to these girders, thus extending your wagon over the wheels, as a farmer does his hay wagon, a foot or so on each side and giving more room inside for sleeping, as you may see. In this case you can sleep crosswise, and you can pack as big a crowd in the bunks as the horse can pull between camps, but for real comfort the side tents will be found best adapted to your purpose, and if more room is wanted a common A tent can be packed in the bed of the wagon and pitched in front of the opening *AB* (Fig. 71), and used as a dining-room and lounging-tent. But a group of boys may go off together with no tent except the wagon cover and no bed except the straw piled



Pattern of a Side Tent

in the wagon bed and have a most jolly and enjoyable time.

For out-door kitchen and dining-room, take tin plates, common kitchen knives and forks, a coffee-pot, tea-pot, bacon and salt pork to use in cooking your fish, game, or domestic fowls bought of the farmers. If you are so fortunate as to have access to an old-fashioned attic you may find there a lot of queer cooking utensils formerly used by your ancestors when all the cooking was done before an open



Old Freight Car Fitted Up for a Hunters' Camp

fire. There may be long-handled frying-pans, small iron camp-kettles, Dutch ovens, broilers, toasters, and a lot of other long-handled utensils which are just the thing for a camp-fire, for the open fire of our grandsires was practically an in-door camp-fire. Don't forget lanterns and candles. These utensils can be hung by hooks overhead or to the sides of the wagon, or put in a long box and strapped to the tail-board or placed under the front seat.

Pockets or small bags sewed to the inside lining of the wagon cover make splendid places to store your toilet articles, combs, brushes, etc. In fact, half the fun of a house-wagon is planning and making little conveniences of this kind.

Pails for watering the horse, and other articles which will not be harmed by dust, may be hung from the axles of the wagon.

The fascinating feature of this sort of camp life is that, like a snail, you carry your house with you and your tent is always pitched. You can stop your horse alongside the trout brook, on the mountain road, the lake shore, or the spring at the wayside, and all you have to do is to pull out your cooking utensils, build your camp-fire, and you are fixed for a day, a week, or a month, and when you return it will be with a bronzed skin, toughened muscles, good spirits, a voracious appetite, and a supply of health to last you through the winter months.

It may be possible that some of the older people desire a movable camp, and the last diagrams show how to form a box car into a camp. Figs. 85 and 86 show an ordinary box freight-car on a siding. Fig. 85 is the end view; *A* is the sliding shutter; *D* is an awning over the doorway; *E* and *E* (Figs. 85 and 86) is the stairway, which can be taken up and put in the car; *B* is the sliding door. Freight-cars can, with very little expense, be made into splendid movable camps. All the duffle may be packed in one and sent to the siding, where your father wishes to camp

CHAPTER VI

SUMMER CAMPING FOR THE BOY PIONEERS IN TOWN OR COUNTRY

THE more time a boy spends out-doors, the stronger and healthier he will become. In the country it is easy for a boy to camp out, but there is no good reason why the city boy should not learn to sleep in the open. Even a small back yard is large enough in which to pitch a tent and build a camp-fire.

If you are going to camp out this summer you will probably want to use a tent. Fig. 87 shows a small, water-proof Baker's tent. They vary in price from $6.00 to $24.50. Fig. 88, miner's water-proof tent, may be had in several sizes. The prices run from $4.20 to $25.00. Fig. 89 shows an old-fashioned A tent—prices from $5.50 to $30.00. There is a special water-proof wedge tent made which runs as low in price as $2.10. Fig. 90 shows a wall tent high in the centre—prices, $6.00 to $38.00. Fig. 91 is a canoe tent—prices from $6.00 to $25.00. Fig. 92 shows a wall tent with a dining fly in front. Fig. 93 shows a teepee, or Sibley tent. This is made with or without side walls, and varies in price from $4.50 to $49.00. Fig. 96 is a V X L tent sold in San Francisco, California. Fig. 94 shows the method of putting up the tent upon a hoop pole. If you boys want

to make a tent of your own, either for the back yard or for the woods, you can take a piece of drilling of the shape of Fig. 97, then take a piece of chalk cord or top string and hem the drilling with the top string stitched in the hem and so arranged that a loop of it extends beyond the hem every few feet, as in Fig. 97. Fig. 98 shows a tent made of a piece of cloth of this kind used in the back yard of a city house. Fig. 99 shows the same used as a shelter for a hammock in a city back yard.

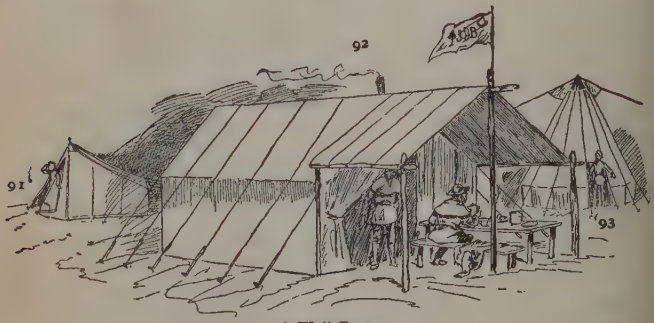
A Baker's Tent

If you want to make this piece of cotton drilling waterproof, take some boiled linseed-oil, spread your sheet out on some boards, then pour the oil on the sheet a little at a time and rub it in with the palm of your hand. Put one hand under the cloth and the other over that, and rub the palms together until the cloth will take no more oil. Stretch your sheet out smoothly in a shady place where the air will circulate under and above it. At the end of eight or ten days take it down from the shady place and stretch it where the direct rays of the afternoon sun can reach it. After sunset turn the sheet over so that the opposite side will be exposed to the next afternoon sun. This will set the oil and keep it from rubbing off, and you will now have a waterproof blanket in which to carry your camp bedding, a

Three Useful Tents

water-proof shelter tent, also the skin of a boat, for by tying the sheet around the framework of the boat you can have a makeshift canvas canoe.

Every Son of Daniel Boone should know that Andrew J. Stone, the arctic naturalist and collector, used a piece of water-proof cloth to cover a frame of willow sticks, and in this frail craft crossed a raging mountain stream; also how to make a camp-fire with flint and steel, and be supplied with

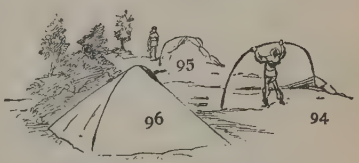


A Wall Tent

a piece of flint, also a horn of punk. Fig. 100 shows the steel that our grandparents used; Fig. 101, the flint. Fig. 102 shows the manner of blowing the sparks to flame; Fig. 103, the manner of holding the flint and steel when striking them together to obtain sparks. These sparks are made to fall upon some dry, baked rags, and when the rags ignite they must be blown into a flame

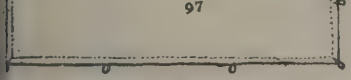
Fig. 104 shows the baked rags and the cow-horn punk-box, which is made by sawing off the small end and the large end of a cow's horn. Cut a piece of wood to fit in the

small end, and fasten it in with tacks made of pins which have been cut into two parts with the file blade of a knife (Fig. 106); the top ends of the pins are used as tacks. The large end of the horn is closed by a piece of thick sole leather. A leather thong, or leather shoe-string, is attached to the wooden disk at the small end by a tack, and to the other disk at the large end by thrusting it through a hole in the leather while it is wet, tying a hard knot in the end, and pulling the knot snug against the leather disk before the leather is allowed to dry. If the wooden disk and the leather stopper are made to fit the horn tightly, the dry, baked rags, charred cotton, dry fungus, or whatever substance you use for punk, when placed in the horn will be perfectly protected from moisture and dampness.



Setting Up the California Tent

To build a fire you need some light, dry wood, which you can split up with your pocket-knife into match sticks about the size of a lead-pencil. When these small sticks begin to blaze, other sticks a little larger in size may be added, and this continued until the fire is as large as you wish to make it. But a bed of hot coals is the best of all fires for the cook. If a narrow trench be dug in the ground, and a fire started in it and constantly fed with small sticks until the trench is filled with glowing coals, you will have an ideal cooking fire.

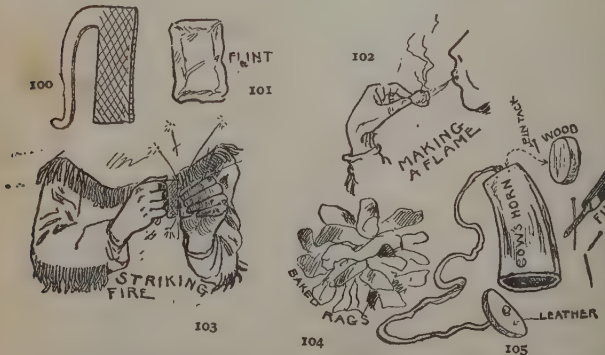


This Can be Used as a Tent

Fig. 107 shows a stone camp bake-oven. It may be built of bricks, stones, or sods, or it may be dug in the side of a

Back Yard Camps

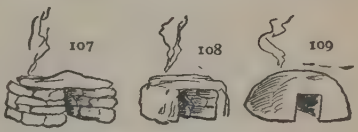
bank. It is only necessary that it shall have an opening for the smoke, so that there will be a draught. Fig. 108 shows the oven plastered over with wet mud or clay. Fig.



Flint, Steel, Punk-Horn, etc., Drawn from Specimens in Author's Collection

109 shows a finished oven in the form of a rounded mound of earth. To bake in this oven, build a roaring fire in it, and keep it going until it is thoroughly heated upon the inside.

Find a stone or a piece of wood with which to stop up the front opening, and another smaller piece with which to close up the chimney hole. With a stick draw all the embers from the oven, leaving no hot coals or ashes inside, then quickly place your dough, or whatever food you wish to bake, inside the heated oven. Close up the front of the oven and the chimney hole, and with some damp mud or clay plaster up all the cracks around the door and chimney cover, so that no heat may escape; then go away and leave the oven alone for several hours. When you come back and open it you will find your food beautifully baked.



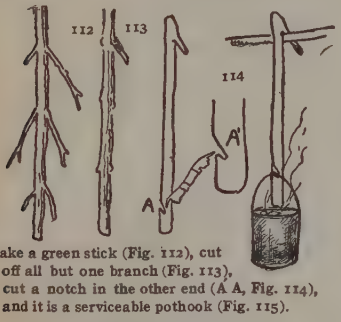
Evolution of an Oven

The ordinary camp-fire is shown in Figs. 110 and 111.

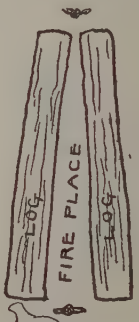
People who are accustomed to an open cook-fire generally have two green logs laid side by side, about seven inches apart at one end and three inches apart at the other end, with the tops of the logs flattened so the kettles and pans may rest securely on them. A forked stake is driven in the ground at each end of the space between the logs, and a strong pole is laid across the forks. From this pole hang the pots and kettles (Figs. 112, 113, 114, and 115). The broad space between the logs (Figs. 110 and 116) is used for the large kettles, while the smaller space is used for the coffee-pot and small utensils. The logs should be five or six feet long if there is much to be cooked, but for less cooking they may be shorter. A good fire can be kept burning between these two large logs with little trouble, and a mod-

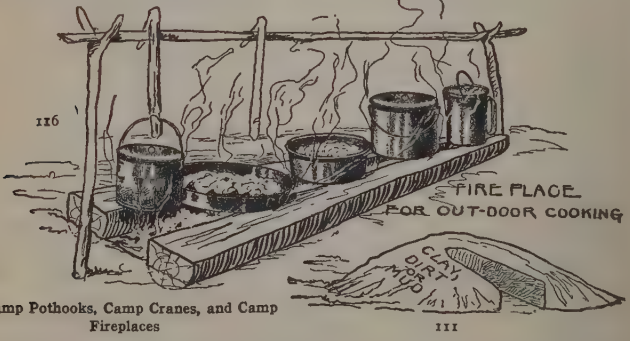
erate fire will last for some time with but little attention. The pots or kettles hang from the cross-pole by pothooks suspended a few inches above the large logs.

Any one of these fireplaces or ovens may be made in a vacant lot or a back yard, as well as in the real wilder-



Take a green stick (Fig. 112), cut off all but one branch (Fig. 113), cut a notch in the other end (A A, Fig. 114), and it is a serviceable pothook (Fig. 115).





Camp Pothooks, Camp Cranes, and Camp Fireplaces

ness, and by their aid potatoes may be baked, green corn roasted, popcorn popped, meat cooked, and bread or biscuits baked.

If You Want to Make Biscuits

take some dry salt, one heaping teaspoonful of baking powder, and two and one-half teacupfuls of flour, and mix it all together while it is dry. While one of you stirs the flour around with a clean wooden paddle, let the other slowly pour in enough water to make a soft dough. Now put some flour on your hands, and without wasting any time make the dough into small balls somewhat smaller than base-balls, sprinkle them over with dry flour, flatten them a little, and place them in the oven to bake.

Flap Jacks

Take four cupfuls of flour, one-half teaspoonful of salt, and one heaping teaspoonful of baking powder; mix them together and add cold water until you have a thin paste or batter. The frying-pan should be hot, and greased by rubbing it over with a piece of fat bacon or a greased paper, and should be placed over the bed of hot coals. Then pour the batter in the frying-pan until it covers the bottom of the pan. As soon as little bubbles begin to form upon the surface, turn the cake over so that the other side will brown. If you can make flapjacks and biscuits you will soon become an accomplished camp cook.

If Bread is to be Baked

for hungry fishermen or hunters, there are Dutch ovens or bake-kettles, but where room is precious, and every pound of luggage must be carried on the backs of horses or mules or men, two tin pans that fit closely together are

light and bake just as well as a Dutch oven; one tin should nest into the other when packed.

Grease the tins and put the bread or "dough-god" in the smaller pan, cover it with the large one, and bury them in hot coals for about half an hour. On a real wilderness trip from which I have just returned we baked the bread in an open pan set on edge in front of the fire. On the camp-fire (Figs. 110, 111, and 116) you can cook almost any sort of a meal, but for a

Long Island Clam Roast

select a level piece of ground or a smooth, sandy spot, and on this make a hearth by paving a place with flat stones or bricks, or if you can find one large flat stone use that. Now hunt up an iron hoop such as is used on certain kinds of barrels and kegs, place the hoop on the hearth-stone, and inside the hoop put your hard-shelled clams. Set them with the part of the clam that opens pointing down, and put them close together so that they will fill up all the space inside the hoop. Over the tops of the clams spread paper, shavings, or a layer of small, dry twigs; set fire to this and cover the fire with sticks about the thickness of your finger or thumb; make a heap of this brush over the hearth and replenish the top wood once or twice to make sure that there will be plenty of hot ashes left when the fire dies down; it is not so much the hot flames as the hot ashes that cook the clams. When the clams open they are done. Have a pan of melted butter, some salt and pepper, then let each camper supply himself with a clean green twig whittled to a point at one end; with this as a fork he can spear the clam in-

side the shell, remove it, dip it in the hot butter, salt and pepper it, and eat it from the end of the stick!

A Clambake

is made by building the fire inside of a stone-lined pit or hole and keeping the fire going until the stones are all very, very hot. On the floor of the pit place the clams, with their "noses" down, as told in the clam roast; put a layer of sea-weed over the tops of the clams, and over this a layer of ears of sweet corn, with the fine inner husks left on; over this place another layer of sea-weed, then some new potatoes, then more sea-weed, and finally cover with a piece of an old sail; cover the sail with sand or earth and leave to steam about thirty minutes, or until it is done. Inland boys can use the green husk of the corn instead of the sea-weed, and may cook chicken, fish, or any sort of meat by wrapping it up in wet cheese-cloth and placing it on the hot stones; over this they can put a layer of potatoes covered with more green husks, over that another layer of green husks, then some green corn, and so on, until they have the pit filled up with all the food obtainable; cover this up and allow it to steam until the viands are cooked. If properly seasoned and properly cooked there can be no better dishes made.

Roast corn by using long, pointed sticks for forks and toasting it over a hot bed of embers.

An In-door Camp-Fire

Those who are fortunate enough to have a good open fireplace destitute of gas logs in their homes may use it for

a camp-fire. The hearth should be covered with several inches of ashes before you attempt any camp-fire experiments; but when you have a foundation of hot ashes and live (wood) coals, any sort of camp cooking may be done indoors. I have cooked a pot of beans in my studio fireplace by placing the pot in the ashes, and with the fire-shovel heaping the hot cinders up until I made a mound of them, the centre of which was occupied by the pot of beans (Fig. 117). This done, I went to bed, and in the morning there was as fine a pot of baked beans, steaming hot, as ever graced a dish of a camp epicure or made a hungry man glad.

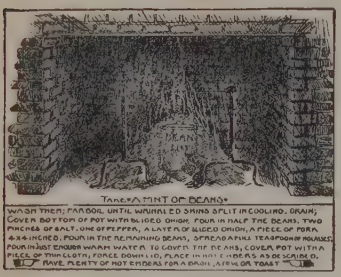

TAKE A PINT OF BEANS;
WASH THEM; PARBOIL UNTIL WRINKLED SKINS SPLIT IN COOLING. DRAIN;
COVER BOTTOM OF POT WITH SLICED ONION. FOUR IN HALF THE BEANS. TWO
PINCHES OF SALT. ONE OF PEPPER, A LAYER OF SLICED ONION, A PIECE OF PORK
4 X 4 INCHES. POUR IN THE REMAINING BEANS, SPREAD A FULL TEASPOON MOLASSES.
POUR IN JUST ENOUGH WARM WATER TO COVER THE BEANS; COVER POT WITH A
PIECE OF THIN CLOTH; FORCE DOWN LID, PLACE IN HOT EMBERS AS DESCRIBED.
HAVE A PARTY OF HOT EMBERS FOR A BRAIN, APPLE OR TOAST

Fig. 117

For this recipe, take a pint of beans; wash them; parboil until wrinkled skins split in cooling; drain; cover bottom of pot with sliced onion; put in half the beans, two pinches of salt, one of pepper, a layer of sliced onions, a piece of pork 4 x 4 inches; put in the remaining beans; spread a full teaspoon of molasses; add just enough warm water to cover the beans; cover pot with a piece of thin cloth; force down lid; place in hot embers as described, and as shown in Fig. 117.

It is not generally known that

Broiled Rabbit

is far superior to rabbit stew. Cut off the legs of the animal and keep them for a stew; spread open the body between the ordinary kitchen broilers (some thin slices of bacon should be put in the broiler with the rabbit); place it over the hot coals in your open fireplace, and broil it first on one side and then on the other. When taken from the broiler, placed upon a hot dish, and buttered with some sweet butter, you will declare that there is no game animal which can excel an ordinary cottontail in aroma, flavor, and all that goes to make food tickle a hungry palate.

CHAPTER VII

HOW TO FORM A BOYS' CLUB, BUILD A BOYS' CLUB-HOUSE, OR ORGANIZE AND ERECT A FORT FOR THE SONS OF DANIEL BOONE

NO self-respecting lad wants to seek the assistance of older people when he desires to form a boys' club, and there is no reason why he should not go about it himself; but to do this a certain amount of knowledge of what is called parliamentary law is necessary.

Parliamentary law is the big name which grown-up boys have given to the rules for conducting public or private meetings. A little knowledge of these rules will enable any boy to start a club and run the meetings in an orderly manner, for every boy knows that when he gets a crowd of his fellows together to try to do anything they all shout at once. But every boy probably does not know that a crowd of men will act in the same manner, and consequently the men have made certain laws or rules to do away with the confusion of an unorganized mob.

In the first place the meeting must have a chairman to preside over it; he is known as the temporary chairman. As a rule, the person sending out a call or invitations to attend a meeting acts as chairman until the regular officers are elected. It saves time if the chairman immediately appoints a temporary secretary, known as the secretary

pro tem., and furnishes him with the paper and pencil to keep a record of all the business transacted. It is customary for the chairman then to arise and tell why the meeting was called and what it is expected to do toward making a permanent organization. The next thing in order is the election of the permanent officers of the Club, Society, Stockade, or Fort.

Any one on the floor may stand up and name whom he pleases as a candidate for the presidency of the club, but it is not a nomination until the name is seconded by some one else on the floor. If there is no good reason to the contrary, the polite and gentlemanly thing to do is to nominate the temporary chairman for the presidency. But when there are a number of nominations made and seconded, the chairman must appoint two election officers called tellers. The secretary *pro tem.* furnishes the tellers with some blank paper torn or cut in slips, and the tellers pass these around to the members present, so that each one may write upon the paper the name of their choice for president. The papers are then collected by the two tellers, who pass around their hats for the ballots, which are taken to the table in front of the chairman, unfolded, and sorted out in separate piles. Thus all the votes for Sammy Pretlow, for instance, are put in one pile, the votes for Eddie Ward in another, and the ballots for Sam Kyle in another pile. After this the ballots or votes are counted, and then the chairman raps on the table for attention and cries: "The meeting will now come to order and listen to the report of the tellers."

One of the tellers arises and makes the announcement in this manner: "There are twenty-three votes cast, of

which Eddie Ward gets five, Sammy Pretlow eight, and Sammy Kyle ten. Sam Kyle is elected." As soon as the result is announced, it will be the "square thing" for some one of the boys who have voted for one of the defeated candidates to stand up and say, "I move that the vote for Sam Kyle be made unanimous." This should be seconded by another lad. The chairman puts the motion in this way: "It is moved and seconded that Sam Kyle's election be made unanimous; those in favor say 'Aye'; contrary 'No.'" When this is done all should say "Aye," so that the secretary may record the fact that Sam Kyle is unanimously elected president of the club.

After this the other officers of the club, usually a vice-president, secretary, and treasurer, are elected in the same manner.

When all the offices are filled some one of the boys stands up and makes a motion in this manner: "Mr. Chairman, I move that Lerdum Benton and Efef Woodall be appointed a committee of two to escort the president to the chair." When the motion is seconded the committee link arms with the new president, one on each side of him, and escort him to the chair; the temporary chairman and secretary stand up to receive him. The other officers may also be escorted to their chairs in like manner. Then three cheers may be given for the officers and the club yell for the organization.

A committee is now appointed by the chairman to draw up a constitution and by-laws for the club, to report at the next meeting, when the constitution may be adopted by the club, as written, or may be then altered as they may see fit.

If the club formed is a Stockade of THE BOY PIONEERS or a FORT OF THE SONS OF DANIEL BOONE, they may adopt the constitution as printed in the next chapter. These are the newest and the most popular forms of boys' clubs, because they are not only out-door clubs, what-to-do-and-how-to-do-it clubs, but are also built upon such elastic lines that the members may be scholars, athletes, base-ball, foot-ball, or la crosse players, and hunters, fishermen, naturalists, or scientists, and in all these lines win honors in the organization. The Boy Pioneers or Sons of Daniel Boone are societies which not only appeal to the boys themselves, but have the unqualified approval of their guardians, parents, and teachers.

The grown-up people in our great country and in other lands have all sorts of mollycoddle societies, the members of which try to bolster themselves up and cover up their own shortcomings by relying upon what their ancestors did some time or another. But the Boy Pioneers and the Sons of Daniel Boone are composed of boys with all sorts of ancestors. The S. D. B. do not ask how your grandfather was born or what he did, his official title or the social position he occupied. Our clubs believe in allowing our old forefathers to personally have all the glory or all the disgrace to which they may be entitled, and our boys claim the same privilege for themselves.

But the Boy Pioneers or the Sons of Daniel Boone will never suffer disgrace, because they believe in the high ideals of such old-fashioned Americans as George Washington and Abraham Lincoln, and they also believe in the vigorous life that helped make these strong men what they were.

The clubs are composed of
Boys who do THINGS;
Boys who expect to do MORE THINGS; and
Boys who will soon be men that will do GREAT THINGS!

Of course my readers know all about Daniel Boone, the mighty hunter, explorer, and builder of our middle western empire, and also about the other brave pioneers and woodsmen who, while hunting, fishing, trapping, and fighting Indians, prepared the way for the settlers and farmers in the wilderness, made new States, and added new stars to our flag. All these pioneers knew how to use their hands, feet, brains, and their five senses. They were men who could do things and did do things; they were quick in thought and action. Had they been slow, dull, or incapable, their scalps would have decorated some Indian wigwam and their bodies been food for the wild beasts. There is perhaps no boy of any nationality, with red blood in his veins, who would not like to be able to do the same things.

Fortunately it is no longer necessary for us to fight Indians; our duty to the red man of to-day is to help him all we can; but there are still the woods, the fields, the forests, the streams, and vigorous out-door sport, and also thousands of delightful secrets of nature for us to discover.

The Sons of Daniel Boone play American games and enjoy the original sports described in this the Founder's book. They enter into athletic contests with other Forts and outside boys' organizations. They celebrate national and local festivals with appropriate ceremonies. They also parade in full costume, with all the regalia of the order, on the birthdays of the pioneers.

A Fort in the United States should be named after some celebrated early American hero, hunter, explorer, naturalist, or scout, and Forts in British-America should be named after some Canadian border hero. The Fort's name should appear at the head of all letters written on club business.

Club Meetings

All club meetings should be held in some chosen place called the Fort or Stockade. The Founder fully describes in this and his other books how to build Forts to suit different conditions. Meetings should be conducted in accordance with parliamentary law.

Tenderfeet

Whenever a new member has been elected he must be made to stand up in the council-room and listen to the reading of the constitution by Davy Crockett. After initiation each newly-elected tenderfoot must stand and listen to Davy Crockett read the pledge (Article IX). When he has read No. 1, the tenderfoot must say, "I will," and so on down to No. 7. At the end he must say, "I will sign the constitution, and upon my word and sacred honor I will keep the pledge."

Remember, a newly elected candidate is a *tenderfoot* until he has proven himself worthy of being a scout and is voted on by a majority vote of the Fort. Daniel Boone can then confer the title upon him by calling him up before the council and congratulating him and saying, as he shakes hands, "I now confer upon you the full title of scout."

After that each officer in turn congratulates the new scout, and following them the members do the same.

Notes and Suggestions

The librarian (Audubon) of each Fort should have in his possession a copy of this the official book of the order.

It is advisable that the Fort gradually get together a small library of out-door books, such as the author's "Field and Forest Handy Book," "Out Door Handy Book," "American Boys' Handy Book," and the "Jack of All Trades."

In small clubs the number of officers may be reduced to three, one member acting as President and Forester, a second as Secretary, Treasurer, and Keeper of the Tally-Gun, and the third as Librarian.

In the Sons of Daniel Boone the charter members are all known as scouts. In place of saying "Mr. President," the Boone boys say, "Daniel Boone, I move, etc." Daniel Boone acts as President, Audubon, the librarian, as Vice-President. The Vice-President, as the reader knows, acts as President during the absence of the latter.

Daniel Boone, on the field, ranks as captain, Kenton as first lieutenant, Davy Crockett as second lieutenant, Kit Carson as third lieutenant, and Audubon and Johnny Appleseed as aides-de-camp for Boone. The officers all together form the Board of Managers for the Fort.

Now that you know how to form a club for any purpose, a Stockade of Boy Pioneers or a Fort of S. D. B.'s, we must put our heads together and devise a plan for a private club-house, a Stockade, or a Fort, where we may hold our meetings without fear of interference from rank outsiders.

How to Build a Fort and Council-Room for the Sons of Daniel Boone

It is a simple thing to furnish the loyal scouts with plans and descriptions of a Fort, but it required some little

Fig. 118.—A Stockade, Fort, or Club-House for Scouts

thought and study to work out the problem of a doorless building.

It is an easy matter to build a house which will accommodate the boys for a meeting-room and social purposes,

but there are always a lot of Indians and Simon Girtys—in other words, gangs of rough boys—who would dearly love to sneak into the Fort during the absence of the loyal S. D. B.'s, and to prevent this the Founder has devised a block-house supported in the centre by column *G* and posts on the corners. (See Fig. 118.)

To build this mystery Stockade some timber is necessary, and the amount of lumber required is altogether dependent upon the size of the building you intend to erect. We will suppose that the Fort is to be 10 x 12 feet in dimensions; then we will require some pieces of two-by-four-inch lumber for the framework. We want to set the block-house high enough to give head room underneath—say, for instance, we make it 5½ feet above the ground. We will then need four pieces of two by four, each 5½ feet long (*M M M M*, Fig. 119). We will also need four pieces of two-by-four-inch scantling each 7 or 8 feet long. (See *N N N N*, Fig. 119.) Now spike the *M* and *N* pieces together, as in the diagram, and then nail the pieces *S S* to *N* and *N* so that the *S* pieces rest on top of the *M* pieces, as in the floor plan (Fig. 120); this gives you the front and rear floor sills. Now take the four short pieces of wood one and one-half or two feet long (*Q Q Q Q*) and nail them securely to the *N* posts so that the tops of the *Q* pieces will be even with the top of the sills (*S S*). Upon the *Q* pieces you rest the two side joists, as in the diagram (Fig. 119), and securely nail them in place. This will give you the frame, or table, upon which the block-house is to rest, but to make it more secure we will build the pier *G* in the centre by erecting the four *A* posts. Then lay the five other floor joists with their ends resting upon the *S* sills. Nail the

uprights *A A A A* to the third and fifth floor joists, as in the diagram (Fig. 119). Connect the bottom of the *G* pier with the ground sills like the one marked *P* in the diagram. The detailed drawing near the knee of the boy with the saw explains how the *P* pieces are notched to fit the *A* pieces.

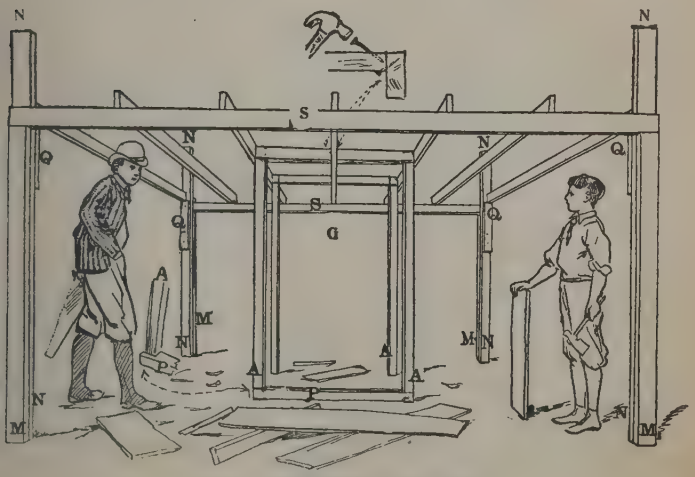


Fig. 119.—Framing the Mystery Fort

The top of the *G* pier will require four pieces—two each for the front and rear—because there is a joist running through the centre of the top of the *G* pier. Nail these top pieces to the *A* uprights as you did at the bottom ends of the *A* pieces, but they will have to be toe-nailed to the middle joist—that is, the nails must be driven in from the side or top and bottom slantingly, as shown in the detailed drawing above *S* (Fig. 119).

These diagrams may look complicated, but there is no work on this building which cannot be understood and accomplished by boys. It is the simplest sort of building. The *G* pier, for instance, is nothing but a box, and the framework for the platform is simply a large table. Fig. 120 shows a plan of the floor—that is, a view of it looking from above.

Fig. 120.—Floor Plan of the Fort

The letters on all these diagrams are so arranged that the same letter represents the same piece or part wherever it may occur. You will notice in Fig. 120 that the *M* pieces are not shown, and when you examine Fig. 119 you will understand the reason to be that the *S* sills resting on top of the *M* pieces conceal them from view on the floor plan.

Now that we have got the platform built, the rest is simple work, and you will see by Fig. 121 why the *N* pieces were made longer than the *M* pieces, for in Fig. 121 you will notice that the uprights (*R R R R*) of the shed are nailed to protruding tops of *N* pieces and rest upon the sills (*S S*).

In Fig. 121 you will see that pier *G* is all boxed up. You will also notice two pieces (*V V*) on the end of the shed, nailed there in the form of an X. These *V* pieces are temporary braces, and if the nails in these braces are not driven all the way it will make it easy to withdraw them.

The two boards marked *W* are nailed there only tempo-

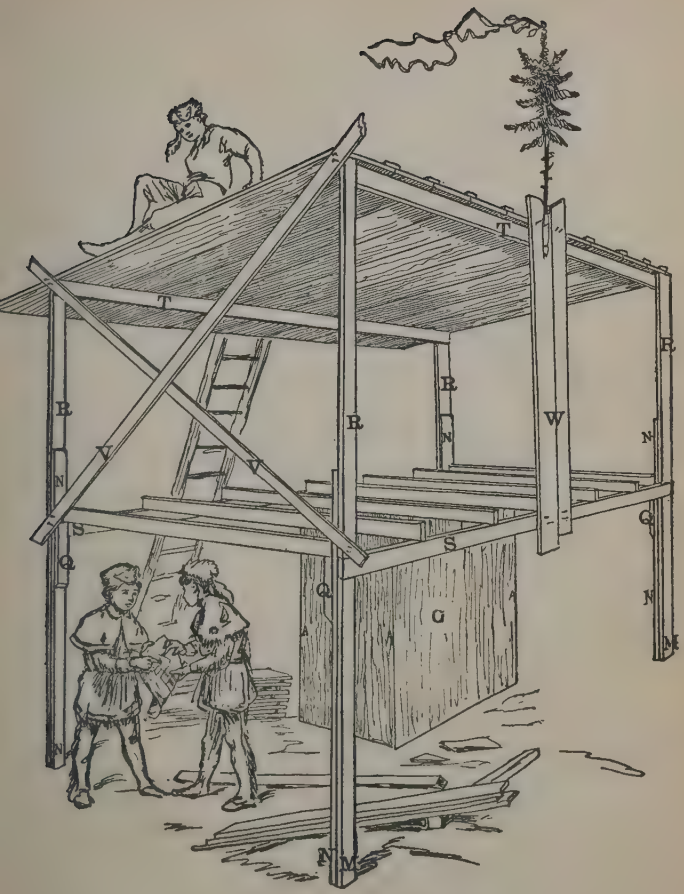


Fig. 121.—View of Unfinished Mystery Fort

rarily, to help support the roof until the front and sides are nailed to it. The tree on top of the boards (*W*), with the ribbon flying from it, is only placed upon a building when the framework has been completed without accident. This is an old and pretty custom of builders, which may be followed by the Sons of Daniel Boone.

The simplest way to make a roof is to make a shed roof slanting from the front to the rear. To calculate this slant, give plenty of head room at the rear end, and then make the front end two or three feet higher.

After the *R* pieces are erected and cut off to the proper proportions, nail the *T* rafters in place, as in Fig. 121. Then board the roof as in the same diagram. To prevent the roof from leaking, the cracks between the boards should be covered with narrow boards nailed in place on the roof. The ends of these strips can be seen projecting above the boards on the roof of Fig. 121.

The laying of the floor and the boarding up of the sides requires no especial skill, but only care.

The front and sides of the Fort should be made like the top of an old-fashioned castle, as in Fig. 118. The sides will, of course, extend above the roof, but in the rear the roof projects over the wall, and hence the boards cannot extend above the roof at this point. However, if you have three sides embattled it will give a noble and impregnable appearance, and visitors are not supposed to approach from the rear.

You may have windows in the side or rear, with heavy wooden shutters to cover them when the Fort is closed, but for the front cut loop-holes, as shown in Fig. 118.

The secret doorway of the Daniel Boone Fort is made upon the rear end of the *G* pier, and consists simply of two boards fastened together with the battens (*B B B*) and hinged with cellar-door hinges to the boxing of the *G* pier, as in Fig. 123.

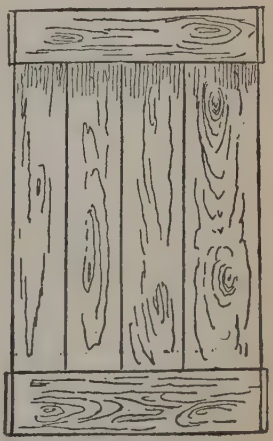


Fig. 122.—The Appearance of the Door from the Outside

The battens (*B B B*) are made a little longer than the door is wide, and as the door opens inward when you close it the projection of the battens will prevent the door swinging out. To conceal the door, and also to further prevent it from swinging out, nail a base-board on all four sides of the *G* pier and a similar one at the top of the *G* pier.

The appearance of the door from the outside (Fig. 122) will then be the same as the other three sides of the *G* pier and give no indication of a concealed entrance.

To enter the council-room from the inside of the pier it is only necessary to have a simple trap-door in the floor, as shown in Fig. 126. This trap-door is made by sawing out a section of the floor and is only large enough to admit the body of a boy. It rests on half of the third joist and is hinged over the middle joist.

The trap-door is a simple thing to construct, and the diagram (Fig. 126) explains its use.

But we must secure the secret doorway so that when

the Fort is unguarded the doorway will be securely barred. To do this without lock or key we take a stout board just long enough to reach from one side to the other of the *G* pier. We hinge this board with a couple of strong hinges to the front of the inside of the pier (Fig. 124); we then fasten a screw-eye to the top of the board, another screw-eye to the floor of the council-room, and another one near the wall of the council-room, as in Fig. 124. To the screw-eye in the door we attach a piece of picture wire, run it through the other screw-eyes, and then through a gimlet hole in the wall and attach a button to the end of the wire, as in Figs. 124 and 125. Fig. 125 shows a little shutter made of a rectangular piece of board fastened to the wall with a screw at one end. This shutter may be moved from side to side by pushing its free end this way or that. The purpose of the shutter is to cover and conceal the button. Those in the secret, when they want to enter the Fort, will push the shutter (Fig. 125) to one side, take hold of the button with their hand, and by giving it a steady pull

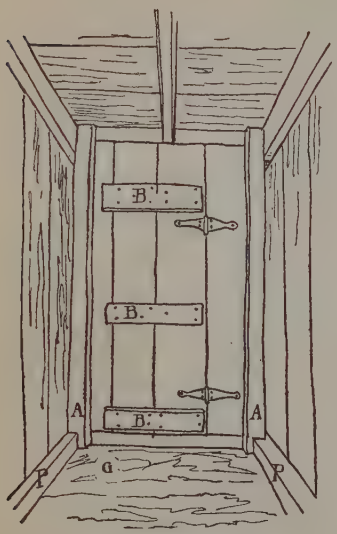
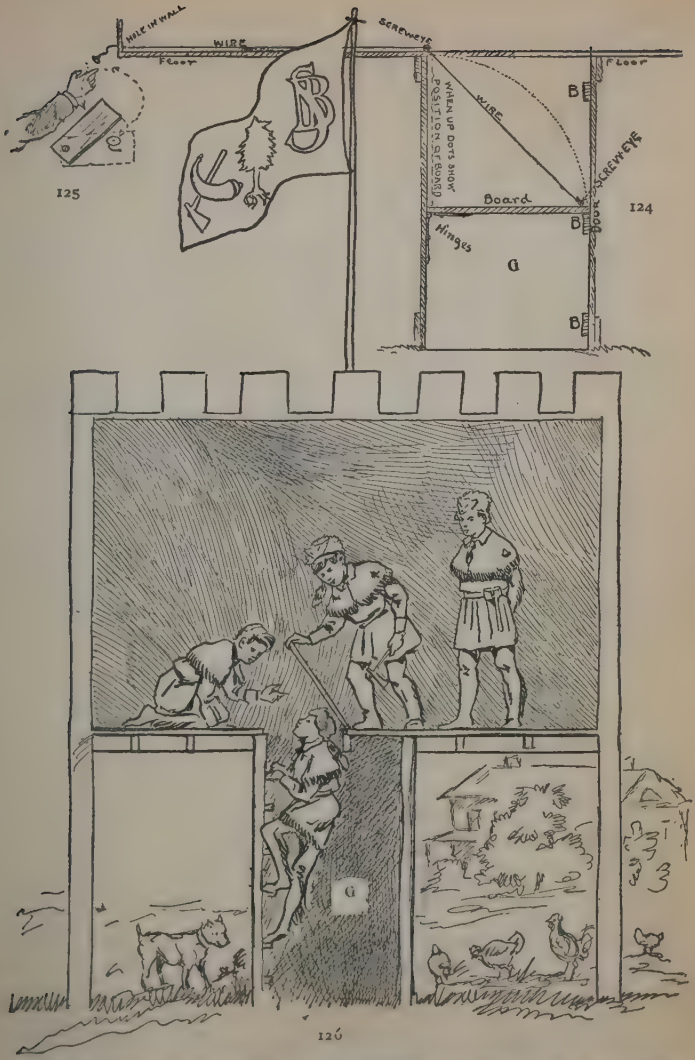


Fig. 123.—Inside of the G Pier



Drawing Showing the Fort Sliced in Half, Displaying the Interior; also the Workings of the Mystery Door

they will lift the hinged board, as shown by the dotted line in Fig. 124, until the board rests flat against the perpendicular side of the *G* pier. This, of course, unbars the door, and the pier may be entered by simply pushing open the door.

If you are careful not to give away this secret to the other boys, no one can possibly get into your Fort without the aid of an axe, and if there are any Simon Girtys so reckless as to hammer and split their way in, they will make so much noise about it that they cannot fail to attract attention. We will not attempt to build a Fort of boards which will withstand a battering-ram or a sledge-hammer attack.

I think, however, a Fort built on the plans here given will be secure against intruders so long as you keep the secret to yourself; and if the secret leaks out you have simply to find a new place and a new method of concealing the button attached to the end of the wire and the secret is again yours.

CHAPTER VIII

A MANDAN COUNCIL-HOUSE AND A BACKWOODS CAMP OR FORT—ALSO A CONSTITUTION TO HANG ON THE WALL

AFTER the hardships of a wilderness trip up near Hudson Bay in search of fresh ideas for you boys, the writer is glad to get back to his own camp at Wild Lands, on Big-Tik Pond, Pike County, Pennsylvania, where he may work in the woods, even if he has not time to play there. Work and play, however, are the same thing under different names, for play is doing a thing because you want to do it, and work is doing the same thing because you must do it. In his books for the boys the writer always tries to remember the things he wanted to do when he himself was a lad, but things which he often failed to do, because there was no one writing for boys then on these topics, and older people did not give much time to superintending boys' play. It is safe to say that no boy who has read "Robinson Crusoe," "Swiss Family Robinson," etc., has not, as he closed these books, given a sigh and wished for a desert island, or at least a cave house, and there is no good reason why he should not have a cave house. Most boys have made attempts to dig caves, but this is dangerous work, for the bank is very apt to cave in on the workers, and does so somewhere in the country every year.

To do away with this real danger the Founder designed and put in his "Jack of All Trades" the first working drawings of an underground club-house ever published; but since then other writers, lacking inventive skill, have used the author's underground house designs as their own, and published them for the boys, so now it is "up to" the author to furnish a new set of designs, and here they are:

This Camp, Den, or Mandan Council

can be built in the woods, a vacant lot, or a city back yard, as the case may be. If your Fort has access to the woods and open country, cut two crotched or forked sticks like those shown by *E* and *F* in Fig. 127. Dig two holes two or three feet in the ground —the deeper the better— and set the poles in them, hammering the ground down tightly about them so that they will be firm and rigid; then cut a ridge-pole (*A B*, Fig. 127) and place it in the crotches, as shown in the diagram. To make

Fig. 127.—The Mandan Ridge-Pole

The Sides

cut a goodly number of poles (*G G G*, Fig. 128) and lay them up against the ridge-pole, as shown in the diagram (Fig. 128).

To make the sides firm, force the lower ends of the *G* poles into the ground; or, if the ground is too rocky, place

a row of big stones at the base of the side or *G* poles, to prevent them from spreading out at their base and slipping from the ridge-pole. At the back end of the shack make a half-circle on the *X Y* (Fig. 129), and set up a number of poles with their upper ends resting against the *A B* stick, or

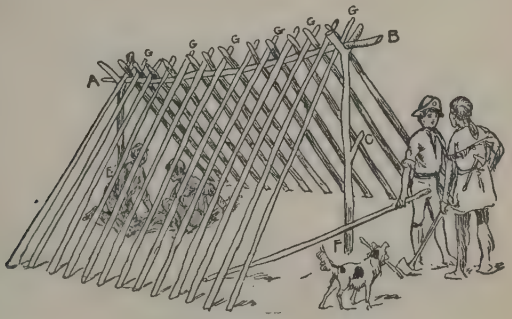


Fig. 128.—The Frame of a Mandan

ridge-pole, and in the fork of the *E* stick, or upright, with their lower ends pushed into the ground on the half-circle mark (Fig. 129). It is only necessary to

Cover the Frame

with a thatch of balsam boughs, straw, hay, or bark to transform it into a good camp. To thatch with balsam or other boughs it is necessary to have some poles nailed on horizontally, as *L L* (Fig. 130), or some smaller green sticks woven in and out of the *G* sticks, basket fashion, as *M M* (Fig. 130). Begin at the bottom as you would in shingling a house, and weave in the green boughs as shown by *K* (Fig. 130). Overlapping these put another row of thatching,

and so on until the top is reached. Do the same with the opposite side, and the camp is covered ready for occupancy. If you are so very fortunate as to be in a real wild country, where big pieces of green bark of spruce or birch may be obtained from lumber camps, or any other bark which may be removed in big pieces, then you can

Shingle the Shack with Bark

Begin at the bottom, and place the pieces of bark (*H H*, Fig. 130) so that the end of one piece overlaps the end of the

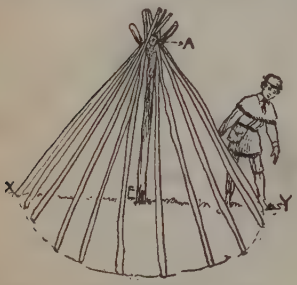


Fig. 129.—The Mandan's Rear Alcove

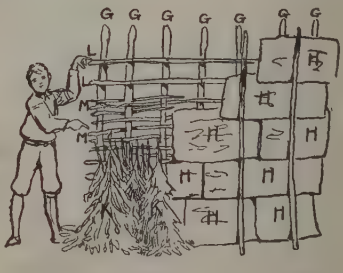


Fig. 130.—Two Ways to Cover the Aides

other. When the bottom row is finished, put on another row in the same manner, with their ends overlapping each other and their bottoms overlapping the first row, and so on until the top is reached. Hold the bark in place by laying heavy poles against them, as shown in Fig. 130. Do the other side the same way, and cover the top or sides by another row of pieces overlapping the top rows of each side.

But if your Fort is in the city or town you can use such material as the town affords, and make your ridge-pole (*A B*)

of two-by-four timber notched at each end, as shown by *A*1 *A*1 (Fig. 131), to fit on the top of the upright *E* and to be firmly nailed in place. Or a plank may be nailed, with its edge upward, to the upright *E*, as shown by *A*2 (Fig. 131), and the sides made of boards (*G*1 *G*1 *G*1, Fig. 131). Any sort of lumber can be used for the *G* siding, and covered with old tin roofing, oil-cloth, or anything which will prevent the water from leaking through the cracks.

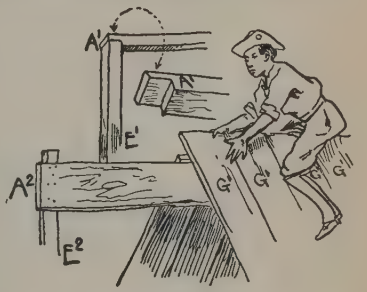


Fig. 131.—Two Ways of Fixing the Roof-Tree for a Board Roof

To make a cave of one of these shacks it is necessary to cover the brush, boards, or thatch with sods, clay, and dirt, as in Fig. 132. A hole is left at *A* for a chimney.

The fireplace is made directly under the chimney hole, so that the smoke may ascend and go out of the chimney. The ends of the sticks at *A* (Fig. 129) will not interfere with the passage of the smoke, and may be left inside the chimney.

If grass seed, weeds, or flowers are planted on the dirt-covered shack, they will grow, and the Mandan council-house will look like a green mound of earth or a garden.

If you make a cave-house of Fig. 131, cover the sides with any old thing you can find, like pieces of canvas, oil-cloth, tin, sheet-iron, or carpet laid over your green boughs; then hay, straw, grass, dry leaves, or a thick layer of small

green boughs with the leaves on them, and over this put your sods and dirt.

Make the entrance (Fig. 132) in the same manner as you make the main structure, as shown by the dotted lines in the diagram.

To make a cave of one of these shacks, cover the thatching with sods or clay, over which put a layer of fine dirt and plant

Fig. 132.—All Done—Lots of Fun

it thickly with grass seed, grain, or any cheap, quick-growing plants; even weeds may be used to conceal the house and give it the appearance of a mound. This kind of work needs more than one boy's labor, and is best built by a club of boys like a Fort of the Sons of Daniel Boone. Such a club must have a constitution, and the reader will find one here suited to his needs as an out-door lad or a Buckskin boy of America.

Constitution
of the
Sons of Daniel Boone

ARTICLE I—NAME

The name of this Association is THE SONS OF DANIEL BOONE.
The name of this Fort is .....

(1) The motto of our Society is the famous one of Davy Crockett:

I leave this rule for others when I'm dead,
Be always sure you're right, then go ahead.

(2) The S. D. B. call is the same as that of the old pioneers:

Who - - - ah! Who - - - ah!

(3) The S. D. B. yell is:

Wow! wow! wow!
Row! row! row!
Gosh—all—hemlocks!
Buckskin and leather socks!
Waugh! waugh! waugh!
Rah! rah! rah!
Cut a notch,
Cut a notch,
Cut—a notch—soon!
For we are the SONS OF DANIEL BOONE.
(Tiger—long drawn out)
WE—WANT—NO—MOLLYCODDLES!

or for the Boy Pioneers:

Take a scalp,
Take a scalp,
And give three cheers!
For we are the BOY PIONEERS.

(4) The colors of the Fort are the same as those of the autumn woods: turkey red, buff, and dark green.

(5) The flag is that given in Dan Beard's book, "The Boy Pioneers, Sons of Daniel Boone."

Article II—Object

The object of the Sons of Daniel Boone is to teach the boys how to form clubs for the purpose of enjoying out-door fun in a healthy, wholesome, boyish manner; also for the purpose of preserving American traditions, plants, and animals, of encouraging American boys to emulate all that was best in the lives of their pioneer ancestors, and advocating and supporting the laws prohibiting the sale of game.

Article III—The Officers

The officers of this Fort shall be a President, with the title of Daniel Boone; a Secretary, with the title of Davy Crockett; a Treasurer, with the title of Kit Carson; a Librarian, with the title of Audubon; The Keeper of the Tally-Gun, with the title of Simon Kenton; Painter of Totems, with the title of Catlin; and a Forester, with the title of Appleseed Johnny.

All the officers shall be elected by ballot, for a term of three months, six months, or a year, as the Fort may decide on election day. The candidates receiving the largest number of votes shall be declared elected.

Article IV—Duties

The duties of Daniel Boone, Davy Crockett, and Kit Carson shall be those usual to the offices of President, Secretary, and Treasurer.

Daniel Boone.—Daniel Boone will preside at all Councils of the Fort and attend to the other duties usual to the office of President.

Davy Crockett.—Davy Crockett must write all official letters and keep the minutes of the meetings of the Council.

Kit Carson.—Kit Carson will keep the funds of the Fort, accounting to the President and Council for all moneys received and paid, and perform the other duties usual to a Treasurer.

Simon Kenton.—It shall be the duty of Simon Kenton to keep the Fort's Tally-Gun, and to make the notches in its stock in the presence of the Council when so directed by Daniel Boone.

Appleseed Johnny.—It shall be the duty of Appleseed Johnny to act as pacifier and peacemaker, to settle fairly all disputes among members on the playground, in camp, or on the athletic field. Appleseed Johnny is also master of ceremonies on Arbor Day.

Catlin.—It shall be the duty of Catlin to design and paint the totem boards, etc., of the Fort.

Article V.—Members and Honorary Members

Any boy under twenty-one years of age, of good moral character, may become an active member. Any "boy" over twenty-one may be elected an honorary member, but can take no part in the business of the Society except as an adviser; and an honorary member's advice or suggestions must be received with respect and attention, but it may or may not be acted upon, as the Fort decides.

Article VI.—Ballot

The ballot for membership shall be secret. .... black-balls shall be necessary to debar a candidate from becoming a member of the Fort.

Article IX.—Pledge

Each member must sign the following pledge:

(1) I will not take life needlessly.

(2) I will give all creatures a fair show for life, liberty, and the pursuit of happiness.

(3) I will not kill more game than can be rightfully used, and I will not countenance nor assist in the destruction of game out of season or at any time in quantities greater than are sportsmanlike.

(4) In making camp-fires I will not cut standing green timber, but use dead or imperfect trees, and will do my best to preserve the forests. I realize that, besides being of immense value to my country, they are the retreat of all forest-loving beasts and birds.

(5) I know that a good woodsman is careful with fire, and I will never carelessly permit fire to run in the woods, and will carefully put out my fire when I break camp.

(6) I will never allow a fire-arm, *even though it be unloaded*, to point at any person, nor will I allow it to point at any animal I do not wish to kill.

(7) I undertake to abide by the game laws wherever I may happen to be.

(8) In all my conduct I will remember that I am a loyal Son of Daniel Boone, and wil never willingly bring discredit on the organization.

This shall be considered the official Charter of Fort..... of the Sons of Daniel Boone, when signed and sealed by the charter members.

Dated.....19..

Note.—Fill in the blanks with the name of Fort, the number of black-balls (votes against a candidate) necessary to exclude a candidate. Each Fort decides for itself the number of black-balls necessary to defeat a candidate for membership, also what dues, if any, are required to run the Fort.

For a constitution of the Boy Pioneers substitute the latter name wherever the Sons of Daniel Boone are mentioned and change the yell as indicated.

CHAPTER IX

HOW TO MAKE WIRE KENS WITH THATCHED LIPKINS AND A BOW-ARROW DOOR

IT may be well to explain at the start that a ken is a house, hut, or kennel; that the lipkin is a roof; but to the gypsies and people of the road, in olden times, any sort of a house was a "ken," and a house with an open door was a "ken with a gyger dup." Because this is a brand-new sort of house for the boys to build, we have given it a very, very old name to distinguish it from all the other camps, huts, and tree-top houses which I have published from time to time.

The material for our kens consists of some chicken-coop wire and some two-by-four lumber, *if we can get it;* but if we can't get that we can use any old lumber that may be handy or even the sticks and saplings cut in the woods.

Fig. 133 shows a ken large enough for a boy's club-house. It is made by simply stretching chicken-coop wire over a wooden framework, but this particular ken has *two walls* of chicken-coop wire, an inside wall and an outside wall, and it may be seen by referring to Fig. 134, which shows the framework. In this cut the windows are framed, but this is not necessary, for if you have some packing-cases about the size you wish for the window opening, you may then knock the tops and the bottoms off and use them for the window-cases.

Fig. 135 shows the proper way to make the rafters of the roof. You will notice that the ends of the rafters in this diagram have a notch cut out of them so as to fit upon the side-plate or top piece of timber of the side walls. This notch is called a bird's-mouth. But it is not absolutely necessary to use so much care in framing the roof unless

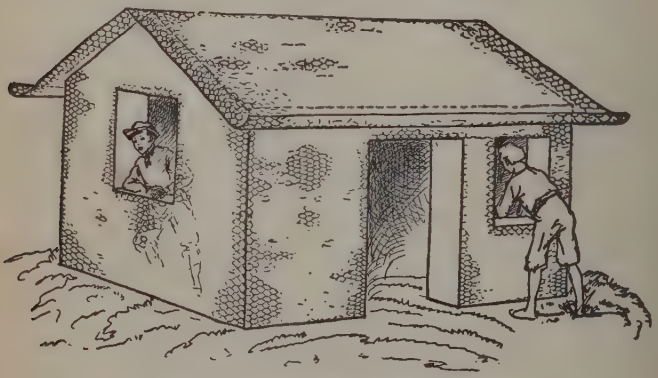
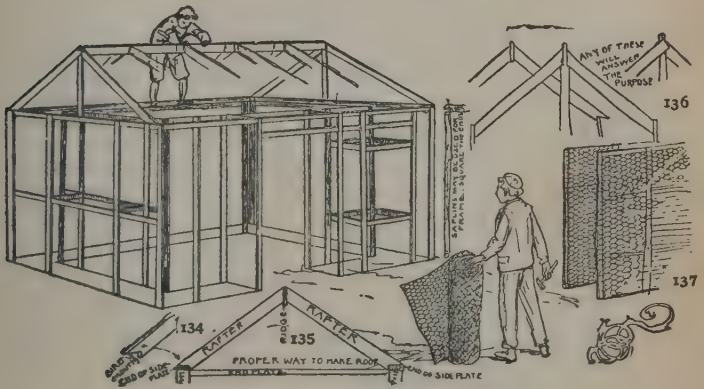


Fig. 133.—Double-Walled Ken Filled in with Mud

you intend to make a very fine house. Any one of the methods shown by Fig. 136 will answer for the end of your roof. Of course there must be other rafters between the two ends, as indicated in Fig. 134, to support the roof, but these may be made like those shown in Fig. 135, or consist simply of poles nailed from the ridge-board to the eaves.

For the frame of the house it is only necessary to have enough uprights to secure the wire netting. Fig. 137 shows how the wire netting is nailed to the inside and outside frames

with staple tacks, leaving a space between the walls. It is unnecessary to cut an opening for the windows in the netting, because the wires will not interfere with admission of light. The space in the walls between the wire netting can be filled with dirt, but to do this we must moisten the dirt until it becomes of the consistency of stiff mud. Good clay makes



How to Frame a Double-Walled Chicken-Coop Wire Ken

the best of material for this purpose, but ordinary dirt will do. To make the mud, shovel up a pile of loose dirt and then with a hoe hollow out the centre of the pile, as you see the builders do when making plaster. Into this hollow pour some water, and with the hoe mix the dirt until it becomes mud. When the mud is stiff enough make it into good-sized mud balls, moulding it with your hands as you would in making snowballs (Fig. 138). When you put these balls in place and pat them down with your hands they

will make mud bricks for your inside wall. If you want to produce a unique effect, you can set sod up edgewise with the grass outside against the wires and fill in behind it with the mud bricks. This will make a wall of green grass, which may be kept green all summer if it is sprinkled with the hose and not allowed to become dry.

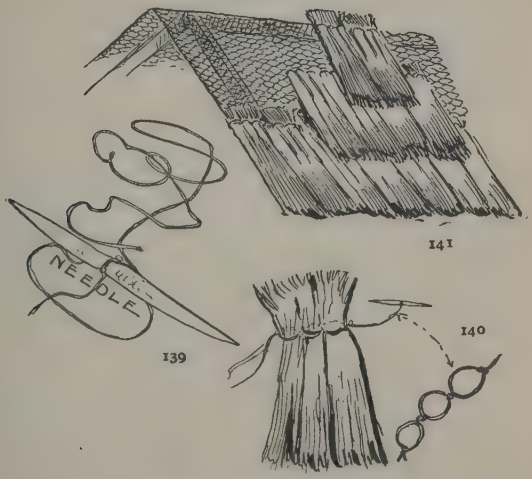
Fig. 138.—Making Mud Bricks

The roof may be thatched with straw, hay, or reeds, as shown in Figs. 139, 140, 141, and 142, and if the wire covering of the roof be curled up at the eaves, as shown in Fig. 133, the thatching may then be covered with dirt and sown with grass seed, or, for that matter, any other sort of seed. This will make a very beautiful little house for the front lawn, but it may be a little too damp for a boys' club-house, except in hot weather, although not too much so for a summer-house.

If a ken is built like Fig. 133 and the walls filled in with mud bricks, the outside may be plastered with cement, which will readily adhere to the wire-screen netting, and you will practically have a cement house with the expense of only the cost of a thin coating of cement. But if you want to build a very cheap ken and the supply of chicken-coop wire or money in your purse is low, you can make one like those shown in Fig. 142.

To do this, drive some stakes in a circle; let them be as high as you wish the walls of the ken to be. To make the

lipkin, wire some sticks together after the manner of the sticks of a wigwam. Now take your chicken-coop wire and fasten it around the circle-stakes, then wire the ends of the wigwam sticks to the top of this, as in Fig. 142. The wigwam should also be covered with the chicken-coop wire.



Showing How to Thatch the Roof

After this some salt hay, straw, common hay, or dried reeds may be used for thatching. With your pocket-knife whittle out a double-pointed needle from a piece of any sort of wood and let it be about six inches long. Cut a little groove in the middle and tie one end of a piece of string to it, as in Fig. 139. Then gather your thatching material up in small bunches, as in Fig. 140, and, commencing at the bottom of your house, sew these bunches of thatch onto the wire

Fig. 142.—A Thatched Wire Ken and a Thatched Lipkin

netting by running your needle in and out, so as to make a succession of loops which, when drawn tight and knotted every third loop, will hold the thatch in place. After you have made a circle of thatch all around the base of your house, commence another circle above it at such a height that it will allow the ends of the upper thatch to overlap the lower ones seven or eight inches. Continue thus to the top of the wall and thatch the roof in the same manner.

In Fig. 141 I have shown the roof of Fig. 133, and it is thatched practically in the same way in which you shingle a house.

In Fig. 142, when you reach the top bind the ends of the straw together so that it leaves a tuft sticking up in the air. This tuft should really be wound until it has the form of a thick rope and then be fastened tightly in this position. But in Figs. 133 and 141 the ends of the top row of thatch on the first side should be bent over and fastened on the opposite side of the ridge-pole, so that when the opposite side is thatched and treated in the same manner there will be no opening at the ridge in the roof to allow the water to run through.

Now, boys, I have given you some suggestions here for houses and details of the work, but I have purposely made this article more suggestive than I usually do. This was to give you an opportunity to exercise your own ingenuity in devising the exact sort of house or ken with a thatched lipkin which may suit your fancy.

An appropriate door for Fig. 142 is the bow-arrow door, made by an old friend of the author's, chief of a Northern tribe of Indians. He was an Indian who talked

French and whose English name was Patrick Cleary. Patrick Cleary Bow-Arrow is now in the Happy Hunting-Grounds, where the doors are always open for the poor red men and where there are no heavy packs to carry over the portage.

A Door, Hinges, and Latch for a Cabin

The writer travelled over a thousand miles to learn how

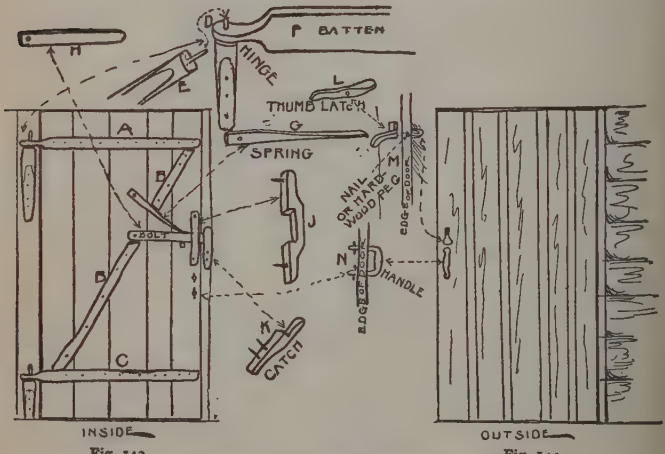


Fig. 143 Fig. 144

The Bow-Arrow Cabin Door and Latch

to build this door for you, boys, although he already knew how to build a dozen different kinds of cabin doors.

Fig. 143 shows the inside of the door with the wooden latch in place. You may use planks from the saw-mill for the door in place of splitting them from spruce logs.

The battens (*A B C*) are made of birch, but you may use any material at hand for them. The hinges (Fig. 143, *D*) are made of birch sticks whittled off at the top so as to leave a peg (Fig. 143, *E*) to work in a hole in the flattened end of the horizontal battens (*A* and *C*, Fig. 143).

The battens *A* and *C* (Fig. 143, *F*) are flattened one way to fit on the door and hold the planks together, and flattened another way (at right angles to the first) at the hinge end (Fig. 143, *E*) to fit over the pegs.

The batten *B* is in two pieces. The top piece serves as a brace for the spring (Fig. 143, *G*), and the bottom piece as a support for the bolt (Fig. 143, *H*), which can be made of a piece of board. The bolt (Fig. 143, *H*) works free upon a nail in the left-hand end and rests in the catch (Fig. 143, *K*) on the door jamb.

The guard (Fig. 143, *J*) fits over the bolt and keeps it in place. The notch in the guard must be long enough to give the bolt free play up and down.

The spring (Fig. 143, *G*) is fastened with a nail to the door in such a manner that its thin end rests upon the top of the bolt with sufficient force to bend the spring and hold the bolt down in the catch (Fig. 143, *K*).

The thumb-latch (Fig. 143, *L*) is whittled out in the form shown, and fastened in a slot cut in the door by a nail driven through the edge of the door (Fig. 144, *M*) and through a hole in the thumb-latch (Fig. 144, *L*). On this nail the latch works up and down.

Fig. 144 shows the outside of the door, and you can see that by pressing down the thumb-latch on the outside it will lift it up on the inside, and with it the

bolt lifts up free of the catch, and thus unfastens the door.

The handle (Figs. 143 and 144, *N*) is used in place of a door knob. It is made of yellow birch bent in hot water.

Any boy who successfully builds a cabin and hangs successfully a door with a latch similar to the one I have described will win the GREAT BUFFALO BILL TOP NOTCH for successful pioneer work.

CHAPTER X

HOW TO HAVE A CIRCUS IN THE WOODS—USE OF THE SCHOOL-BOY VAULTING-POLE, ETC.

WE have had enough of Forts, club-houses, and that sort of thing for the present. We know how to dress, how to hold a meeting, and how to build a club-house, and now we want to get together for a summer outing in the woods and have some good, old-fashioned fun. Davy Crockett's Day does not come until August, but it will not do to remain idle until then. June is a glorious month for out-door excursions and just the time to build swings and other similar devices.

On the eastern side of this continent, the farther north you go the more you are struck with the popularity of the swing. After leaving Quebec, as the train goes dashing by the quaint little French villages and settlements, everywhere you see the gaudy red wooden department-store swings filled with French Canadians. You will see them way up beyond Roberval and Lake St. John, and when you take your packs on your backs and canoes on your shoulders at the end of the railroad and strike into the wilderness, at the first log houses with French roofs (for up here they put a mansard-roof even on the log house) which you come across you will in all probability see a bright red swing, one

of those turned out by the factories, and which must have been carried on a pack-horse's back into this wilderness.

At the last log house of the frontier settler, beyond any roads which a horse could travel, I saw a swing made without ropes. Evidently it was the work of the pioneer himself, and his only tools were an axe and an auger (Fig. 145). But I am afraid that for small boys this would be rather a difficult swing to make and too strenuous an undertaking, so we will begin with the rope swing (Fig. 146).

Fig. 145.—A Pioneer Swing from Northern Canada

Of course every boy knows how to make a rope swing by tying a rope to an out-stretching limb and putting a board seat at the bottom loop; but in Fig. 147 is shown how to make what the sailors call the bowline bend. The diagram shows this knot in its loose condition; when it is pulled taut it will not slip or come undone. It is a most useful knot to know and every lad should be familiar with it. With a double bowline you can make a swing with a single rope, as shown in Fig. 148. To tie the double bowline, make a loop at the end of your rope, then give a great turn to it, as shown in *F* (Fig. 148). Then bring the bight (loop) up through the middle of the turn you made in *F*, as shown by *G* in Fig. 148. Next bring the two ends of the rope through the loop at the top, as shown by *H* (Fig. 148). When this is drawn taut it will

make the sling shown in *X* (Fig. 148). With this sling you could let a man down from the window of a tall building in perfect safety.

Fig. 149 shows how to make a pair of parallel bars between two trees; for the bars you want two straight and strong pieces of saplings, which may be nailed on either side

Swings, Knots, and Bars

of the trees and supported by the cleats marked *K* in the left-hand side of the diagram (Fig. 149). Or, if you wish to make it so that you can remove the bars when you are through with the fun, you can spike on double cleats, as shown in *K K* (Fig. 149) or *K K K K* (Fig. 150).

L and *L* in both of these diagrams are pieces of board nailed across the cleats to prevent the side bars from falling out. With such an arrangement your parallel bars may be slipped in and out of place at your pleasure.

Every young gymnast wants a horizontal bar on which he may skin the cat, chin himself, and do other stunts so dear to all the boys. For this purpose we want to select a good, stout ash or hickory pole, and square its ends with a hatchet, as shown at *E* (Fig. 151). It is now only necessary

Putting Up the Horizontal Bar

to find two trees close enough together for our purpose and nail the cleats (*C*) on each tree at the same height from the ground, so that when the pole is rested upon them it will be horizontal. To prevent the pole from slipping off this support, nail the two upright cleats to the tree (*D D*) and make them just far enough apart to admit the square end of your pole between, and *N* (Fig. 151) will prevent the bar from springing out of place. You will then have your

horizontal bar complete. Probably, however, you will derive more fun from the Johnny Appleseed jumper (Fig. 152) than from all the other contrivances put together.

The Johnny Appleseed Jumper

This is named after the famous forester of the Ohio Valley, and so named because it is made of two young trees.

Select two young saplings which are tall enough for the purpose and young enough to be elastic. Let one boy climb as far up the tree as he can without danger and make a rope fast near the top; then let all the boys get together

and bend the end of the tree down within reach and hold it there until one of them makes the timber-hitch (*A*, Fig. 153), around the top branches and then throws a number of half-hitches (*N*, Fig. 153), until he has knitted them securely together, as shown in the lower sketch of this diagram. *B* in each diagram is the long part of the rope. When the rope is fastened to the tops of two saplings in this manner a boy can make a succession of giant and wonderful leaps by grasping the rope in each hand, as shown in Fig. 152. In fact, if he is not very careful the spring of the saplings will throw him loose from the rope.

Vaulting-Poles for Boys

In the olden time, when the boys had a regular calendar of sports, these poles were much used; but you must not understand that they are in any way related to May-poles or are decked with flowers and planted on the green for the boys to caper around. Each boy carried his own pole when pole-vaulting time came, and it used to come as regularly as marble time, top time, kite time, and stilt time. Each lad in those days, as he sped on his way to the little log or frame school-house, made a short cut, and by the aid of his vaulting-pole cleared the brooks, ditches, and even the fences that barred his path. It is a fine and exhilarating exercise, and you boys of to-day must not let it be forgotten or relegated to the athletic contests alone.

The boys' playground vaulting-pole is not the big stick still used by athletes in their record-breaking leaps over strings, but each rod is made in proportion to the height of the boy using it. Formerly the favorite pole was made of

a hickory sapling which was then known as a hoop pole. This was not because the pole was bent in the form of a hoop; on the contrary, the straighter the pole the better it was for our purpose. They called them hoop poles because the hoop-pole man used such saplings from which to cut, with his drawing-knife, the long, limber strips of wood and bark used by the coopers to make barrel hoops.

Hickory poles to-day are sometimes difficult to procure, but ash or any tough wood that will not break easily will answer the purpose. If you make your vaulting-rod of dressed lumber you must be sure that the grain runs parallel with the outside of the pole, that is, runs lengthwise with the pole, for if it runs crosswise or diagonally it may break and give the vaulter a bad fall. A good way to decide upon the length of your vaulting-pole is to set the pole up alongside of you, hold your arm aloft, mark the spot where your finger-tips reach, then measure two hands higher and cut it off at that point. The diameter of the vaulting-pole must also be governed by the weight of the boy using it. It should be thick enough to do away with the danger of breaking and not so thick as to be a heavy and clumsy burden. If you make your vaulting-pole of saplings you may decorate the top with the designs cut in the bark while it is green, and the effect is better if a bunch of different-colored ribbons is fastened to the top end of the pole by a tack.

Since pole-vaulting was a pioneer sport, the tail of any sort of animal, or a bunch of feathers attached to strings, may be used in place of the ribbons. These things serve not only for a decoration for your rod, but also as a mark

by which you can tell your pole at sight even when it is stacked up with a bunch belonging to the other boys in the gymnasium or the hallway of the school.

Long-distance running is now the fad with athletes and boys, but for growing lads there is grave danger of permanently injuring themselves in their efforts to make records in this line. The boys are ambitious, and it is right they should be ambitious, consequently they do not like to be beaten in anything they undertake to do. But this very ambition, laudable as it is in itself, makes long-distance running dangerous for small lads.

You must understand, boys, that your body is a machine and your heart supplies the power; the faster you run and the longer you run, the greater the strain there is upon the pump, which we call the heart, and the greater the danger there is of overtaxing its powers.

Here is where the vaulting-pole will come in as a good, wholesome exercise, even for a long-distance jaunt, because when you start out with your poles you do it for fun and not for a time record. You go across country leisurely, now walking, now running, now vaulting a brook or a hedge, now resting on the greensward, and, in fact, making a regular picnic of the excursion. Of course pole-vaulting is also adaptable to athletic contests, but in such a case the race-course should not be too long and this will do away with some of the danger of overexertion.

After you have practised running and vaulting make up a team and challenge some other team to a contest of skill. From three to five boys form a team. The pole-vaulting field should be comparatively level and open, but

it should have some obstructions, either natural or artificial, such as hurdles, ditches, brooks, hedges, or golf-link bunkers. When the time comes for the contest let the captains of the two teams toss for position. A short distance from the starting or taw line another line is drawn parallel with the first. The distance must be determined by experiment. Since each contestant must cast his vaulting-pole (as he would a spear) over this second line, therefore before a match is entered into there should be some unofficial meets where the contestants line up and cast their rods as the savages do their javelins. A little practice in this line will give you the figures by which you may judge just how far the average boy can cast his vaulting-pole. This is necessary in order to establish the casting-line or mark at a proper distance from the taw line, for it is evident if you make the distance too great between the two there may be no race at all, and if you make the distance too short every duffer in the team can cast his rod over it.

But this, like a lot of other preliminary work, must be left to the good sense of the boys, for pole-vaulting contests, like all other athletic sports, have so many details that it would require a book to give them all and would make but dry reading at the best.

When all is ready an umpire is stationed at the taw line, the second line, and the end of the course; the opposing teams are lined up, each one standing with his left toe on the mark and grasping his vaulting-pole in his right hand. When the word is given to start, or the pistol fired, each lad casts his rod with all his force. Those whose rods fall inside of the line are "duffers" and counted out of the race; but

the boys who have succeeded in casting their rods so that their ends rest over the line, dash after their vaulting-poles, pick them up as hastily as possible, and run down the course vaulting the obstructions. At the end of the course they turn and come back over the same track. The ones reaching the starting-point first win the contest.

If one man comes in ahead of the rest on the A team his team is entitled to two scores, but if two of the B team come in ahead of the rest of the A team that would make a tie race. In other words, No. 1 gets two scores, No. 2 gets one score, and No. 3 gets one score. If there are four or five on the teams the rest get nothing. Each boy to be counted in the race, however, must return with his vaulting-pole in his hands.

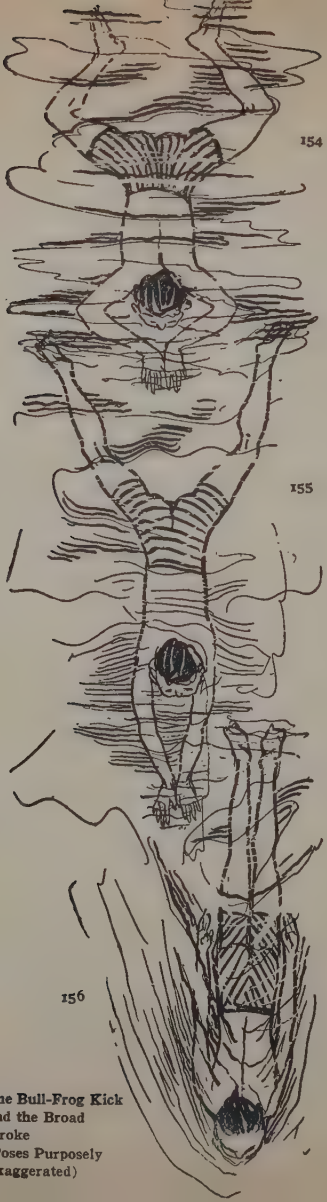
If you are fond of excitement and fun, I'll promise you that the pole-vaulting race will delight your heart. Of course a great deal depends upon the number and the character of the hurdles that are to be overcome, but it is great fun for the spectators as well as the contestants, and there is nothing this side of a flying-machine that can give you the delightful sensation produced by a clean, long jump with your vaulting-pole on a summer day.

CHAPTER XI

WATER FUN: HINTS ON SWIMMING—HOW TO MAKE A SWIMMING HOLE—HOW TO MAKE A PIONEER WATER SWING, AND HOW TO MAKE A BISON McCLEAN ELEVATOR

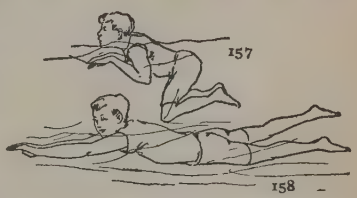
EVERY Pioneer must know how to swim, and it is the duty of the officers of the Fort to instruct the other members in the art. Figs. 154 and 157 show the first position assumed in the common method of swimming. Figs. 155 and 158 show the second position, where the arms have been shot out in front ready to make a sweeping stroke, with the hands used as oar blades (Fig. 159), until they are brought to the sides, as in Figs. 156 and 160. In some of these diagrams the positions have been purposely exaggerated to make them more intelligible.

Fig. 161 shows the way to tread water. Fig. 162 is a group of Eastern boys swimming hand over hand. Fig. 163 shows the English racing overhand stroke. Fig. 164 is the most difficult stroke of all to learn; it is known variously as the racing stroke, the East Indian stroke, or the trudgeon. In this the swimmer's head is beneath the surface most of the time, and his only chance to catch a breath of air is in the part of the stroke when the hand is coming back and just as the right elbow passes his face.



The Bull-Frog Kick and the Broad Stroke (Poses Purposely Exaggerated)

In the trudgeon one swims mostly upon one side. The overhand movement is used, first one arm and then the other being raised over the water. When the left arm is extended above the head the legs are spreading apart for a kick; when the left arm is brought down the legs are extended and then brought together with a sharp kick called the scissors kick. The right arm is in the meantime brought forward above the water, and as the right arm comes down the left arm is thrust out or extended. The scissors kick is made every other stroke by spreading the legs (Fig. 165), and then bringing them together with a quick movement called a "snap."



Side View of Breast Stroke and Bull-Frog Kick

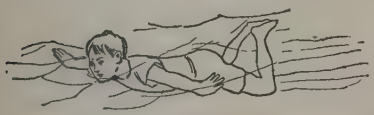


Fig. 159.—Still Another View of Breast Stroke

Figs. 166, 167, and 168 show another racing stroke, but this is the celebrated crawl, an American improvement on the Australian, Indian, and English method, and claimed to be the fastest mode of swimming yet invented.

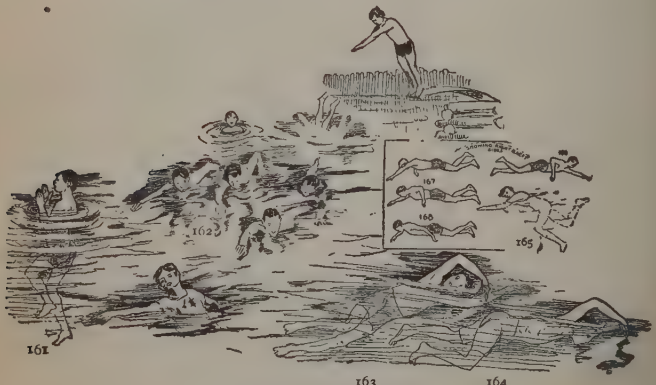
Fig. 160.—Another View—Same Stroke as Preceding

Fig. 166 shows the first position, an easy reach with the left arm and a short thrash with the feet. In Fig. 167 the

arm has been brought back with elbow high, much like the motion of a dog's front legs when it is digging out a woodchuck. Fig. 168 shows the end of the stroke with hand brought back to him.

Fig. 169 is the old reliable dog fashion. In this method the arms move like the front legs of a dog, and the swimmer's feet kick in any old way to keep him from sinking.

All boys who teach themselves to swim unaided learn first to swim the dog fashion. Fig. 170 shows how a good



Various Strokes and Vogues

swimmer may, by grasping an exhausted person's arm and swinging the person's head on the swimmer's shoulder, paddle with one hand until he reaches the shore.

Fig. 171 shows what is called the neck hold. Here the rescuer swims on his back, using his legs to propel his body through the water, his hands on the neck of the exhausted

or drowning comrade being prevented from slipping off by the projection of the jaw-bones.

There is only one way to learn to swim, and that is to get into safe water with experienced companions *and swim.* Then, after you have gained confidence in yourself, you may make some use of articles written on this subject and the diagrams here given will be of some service to you. These notes, however, are only hints and do not pretend to teach the reader how to swim; they serve, however, as an appropriate introduction to the following diagrams and tell

Fig. 169.—Dog Fashion

Fig. 170.—The Arm Hold

How to Build a Swimming Hole

Along the Atlantic and Pacific coasts Nature has furnished immense pools in which boys may swim to their hearts' content. At the edge of the Northern States the Great Lakes furnish ample opportunity for bathing, but there is a vast stretch of country between the Atlantic and the Pacific and south of the Great Lakes where there are thousands and thousands of boys but no oceans or lakes. It is for these boys that I am writing.

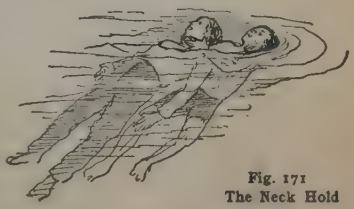


Fig. 171
The Neck Hold

Of course, where the large rivers come near their homes, there is always good swimming from the sand-bars and flatboats, but only a small proportion of these boys live near the rivers. There are, however, but few of them who have not some little brook or creek in the neighborhood.

Suppose there is a brook in the pasture lot, a brook with a slow current too shallow for swimming, as in Fig.

Fig. 172.—Slow-Water Dam

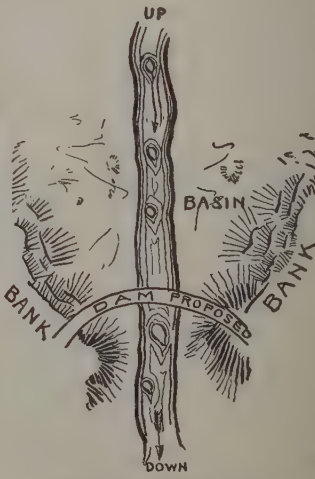
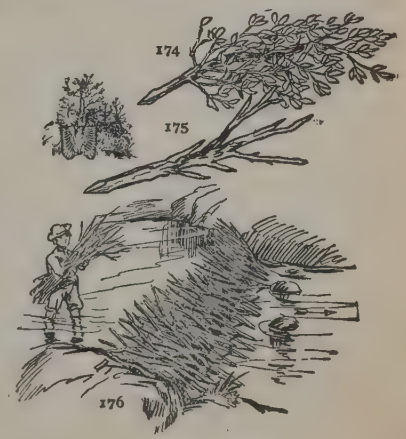


Fig. 173.—Swift-Water Dam

172. You can see from this map that below a basin or marshy spot a point where the banks come close together has been selected as a proper place to build the dam. In this case the dam runs straight at right angles to the stream; but if the stream has a swift current, build the dam in the

form of an arch with the convex side up-stream and the concave side down, as shown in Fig. 173. To build this dam, cut a lot of brush like Fig. 174, trim it off like Fig. 175, then place it in the water with the pointed ends down-stream and the branches up-stream. Commence in the middle of the stream to do this, and push the pointed ends into the bottom of the creek; then build each way until you reach the shore, as in Fig. 176. When you trim the brush, save all the small branches and leaves in a pile together. After you have made the foundation like Fig. 176, weight it down with stones and clods. Cut some green logs and let them rest lengthwise against the bottom of the dam upon the up-stream side. Begin again in the middle and lay more brush, working away toward each shore as you did in the first place; but this layer of brush is not trimmed—the small branches and leaves are left intact, as in Fig. 174. If you do this carefully your dam will now look like Fig. 177.



Fagots in Place

Of course, the water runs through this all the time, but as you build it up higher and higher, pressing each layer down with a weight of stones and mud and gravel, gradually

less and less water will escape. When the dam has been made high enough to secure a sufficient depth of water in the pool, load down the dam with more logs and stones, hay, dry leaves, and such rubbish, until you have it as in Fig. 178. If you will look at Fig. 176 again you will see that any log you float in above the dam, and allow to rest lengthwise with the dam, will be held in place by the branching

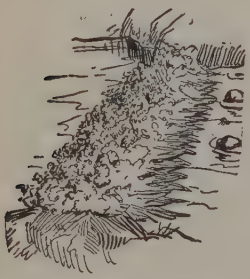


Fig. 177.—Brush Over Fagots

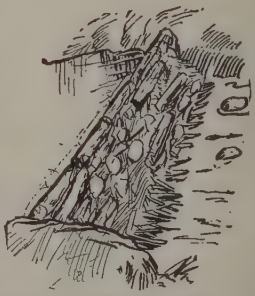


Fig. 178.—Stones and Logs Over Brush

ends of the brush of which the dam is composed. After you have made your dam in the form of Fig. 178 plaster it over with clay and mud. In completing it, be sure there is plenty of mud and clay upon the inside or up-stream part of the dam. This will stop the flow of water, and the latter will begin to rise in the artificial pool you have made by stopping up the outlet. Some water will seep through, but so long as it only trickles out of the bottom it will do no particular harm. Fig. 179 shows a finished dam. Build it according to the directions I have given and it should be a success, for this is the way the beavers build their dams.

Easily Made Swimming-Pool Devices

Boys on the coast have all sorts of wonderful novelties provided for them at each picnic, clambake ground, and place of resort for bathers. The coast city boys have such places as Long Beach and Rockaway and Coney Island in which to disport themselves, but the inland boys must rely upon their own ingenuity for their swimming-pool devices, it often being necessary for them to build a dam themselves in some brook or creek in order to make a pool deep enough in which to swim. But many places have natural pools formed by rocks or other obstructions in the waterways that are shady, secluded, and deep enough for the most ambitious swimmer and diver. All natural advantages, however, can be greatly enhanced by a few rustic swimming-pool novelties, and the Pioneer swimming-pool sweep affords an opportunity for any amount of fun. A boy can build one of these with no other tool than an axe, and no other material than such as the woods afford, some clothesline, and a few spikes. The sweep (Figs. 180 and 181) is the trunk of a small tree, the butt nailed to a standing tree. Fasten the butt in such a manner that the sweep may move upon the spike without splitting. Then make a pair of shears (Fig. 182) by lashing two stout saplings together. Point the butt ends of the shears, and force them into the ground at the proper distance in front of the tree to which

Fig. 179.—Clay, Mud, or Turf Over Logs and Stones

the butt of the sweep is attached. Lift the end of the sweep so that you can get the crotch of the shears underneath it.

If the sweep is very heavy this can be done gradually by working the shears under it as it lies upon the ground, and then gradually forcing the shears up until they occupy the

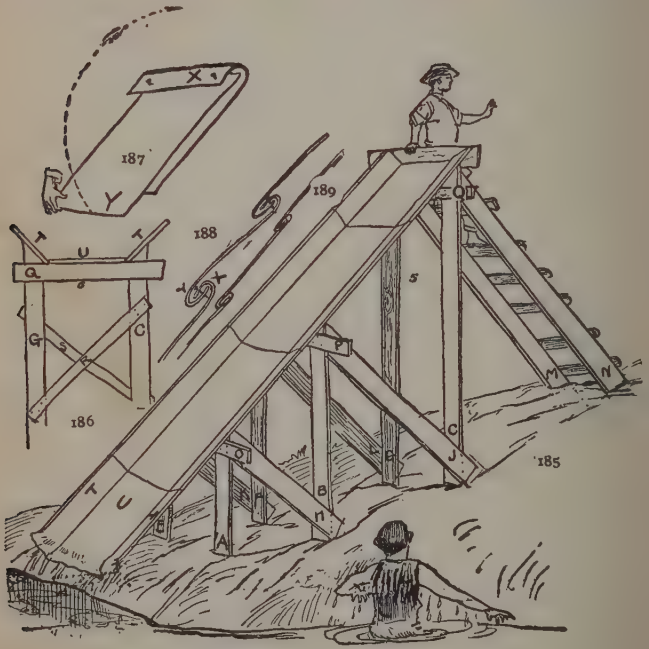
position shown in Figs. 181 and 182. The shears should make a square or right angle with the sweep. The swing-rope, of course, should be attached to the small end of the sweep before the latter is elevated. The sweep may be hauled in position by throwing the swing-rope over the branch of a tree and having a crowd of boys take hold of the end of the rope and pull until the sweep has the right elevation. Then make the rope fast temporarily until the shears can be adjusted underneath to support the sweep; after which an additional spike may be driven into the butt to make it more secure.

It is only necessary now to attach either a ring or a cross-stick to the end of the sweep-line and fasten a small line to the rope with which to draw it back, as shown in Fig. 183. If you have a steep bank from which to launch yourself over the deep pool, you are ready to begin the fun. But if the bank is sloping it is an easy thing to make a platform by driving two forked sticks into the ground, laying a cross-stick in the notches, and nailing one end of a plank upon the cross-stick, as shown in Fig. 184, or you may use a number of small holes in place of the plank by nailing them by one end to the cross-stick, and then have a scramble for the first swing out over the water and a delightful plunge in the cool pool.

In Kentucky the boys make a "slippery" by the simple process of sitting down in the mud at the top of the bank and, with the aid of their hands and feet, working their way down to the water's edge, forming a furrow as they go.

But in the Northern and Eastern States, where the banks are rocky or composed of sand and gravel, the real "Ken-

tucky Slippery" cannot be made. We can, however, build an artificial one of planks, as shown in Fig. 185. Don't be alarmed; there will be no danger of splinters; for the planks



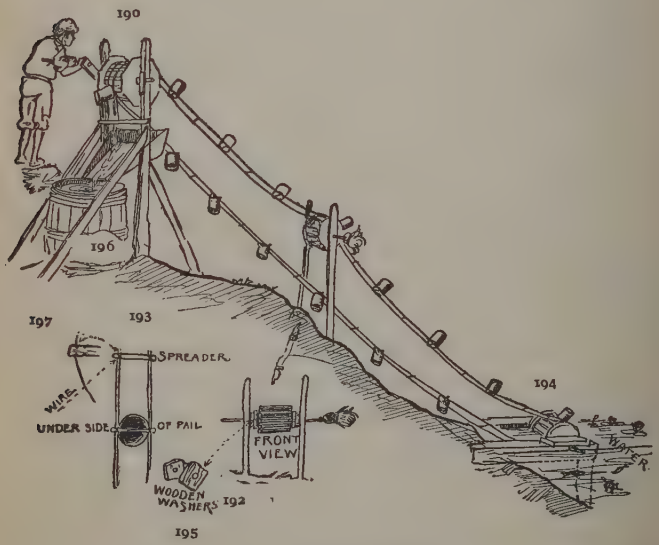
Details of a Wooden Slippery

in this case are covered with pieces of canvas or cheap oil-cloth such as is used to cover kitchen tables. Make a trough by using one broad plank or two small planks for the centre-piece (*U*, Figs. 185 and 186). This is supported by the

cross-pieces *O P Q*, to which it is nailed. The sides of the trough are supported by the uprights *A B C E F G*, which are made firm by the braces *H J K L M N*. Fig. 186 shows a front view of a section of a trough. Very few braces will be necessary on a small slippery, but if the structure is of such proportions that it has an inclination to wabble during use, the uprights may be further braced by the diagonal pieces *S R*, as shown in Fig. 186. The slanting sides to the trough make the most comfortable slippery, but if its construction tests your skill too severely you can make the sides (*T*, Figs. 185 and 186) upright like the sides of a box.

The braces (*M N*, Fig. 185) are made into a ladder by nailing cross-pieces upon them, as shown in the diagram. There is an oil-cloth stair-carpet which comes by the yard and may be obtained in long strips; if a strip of the right length of this material can be procured it will tend to simplify the work of covering the trough. But in case you use the ordinary table-cover oil-cloth it must be tacked on the plank in such a manner that there shall be no danger of the coasters having a misunderstanding with a tack. To do away with all danger from tacks, commence at the bottom, as you would to shingle a house, and let the piece of oil-cloth (*X*, Fig. 187) extend a few inches beyond the plank. Now lay the next piece of oil-cloth (*Y*, Fig. 187) on top of *X*, as shown in the diagram. Curl the top of *X* over *Y* and tack it securely to the side pieces (*T T*, Fig. 186). Use no tacks on the centre (*U*). When you have securely tacked *X* to the sides through the top of *Y*, bend *Y* up, as shown by the arrow in Fig. 187, and fold it over the top of *X*, as shown

by the side views (Figs. 188 and 189). Go through the same process with the next piece of oil-cloth. In this manner you can shingle your whole trough without exposing the head of a single tack or making a wrinkle to worry the coaster as he



The Adam Poe Elevator

glides down to the water. Figs. 188 and 189 show the edge of the oil-cloth, explaining more fully how this is done. After the slide is covered with oil-cloth you will need some sort of lubricant. A pail of lard will probably answer the purpose very nicely, but it will necessitate a lot of soap to clean the lard off your body after you are through bathing;

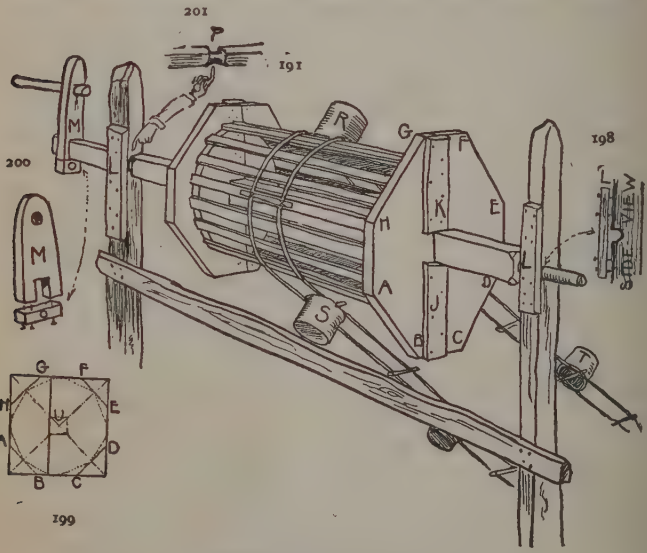
it will be better if you can get old-fashioned soft soap to cover the trough.

How to Make an Adam Poe Elevator

If the reader wants something that is not only practical but picturesque as well, he will find both of these qualities combined in the Adam Poe elevator. Besides which, the whole machine can be made from the rubbish-heap of any country-house, farm, or camp, or it may be made in miniature for a toy.

Fig. 190 is a rough sketch of an Adam Poe elevator located on a side hill. A glance at this sketch will show you that the whole machine consists of two pieces of clothes-line, some tomato-cans, and a few little sticks for spreaders. The loop or belt of clothes-line runs over three spools. In a tree-top house only two spools would be necessary, for the middle spool (Fig. 192) is used as a support to keep the top line of cans from sagging. When a boy turns the crank or windlass at Fig. 190 the can-laden belt of clothes-line moves over the spools; the cans on top, being all upside down, go down into the water in that position at Fig. 194, and come up on the under side of the spool filled with water. When they reach the top spool (Fig. 190), they turn upside down and empty the water into a wooden trough placed there to catch it, and from the trough the water runs into the barrel (Fig. 196). Fig. 193 shows the clothes-line with the wooden spreaders attached by a wire and the tin can attached to a spreader. Fig. 192 shows a front view of the middle or supporting spool with a broomstick shaft. This spool and the lower one (Fig. 194) are both made of "hard-bread"

crates. Fig. 195 shows some wooden washers, which are simply pieces of boards with holes bored through them, and used each side of the "hard-bread" crate to prevent it from rubbing against the upright posts. Fig. 197 shows the end



An Enlarged View of Fig. 190.

of the spreader, the wire, and the notches in the flat stick to hold the wire when it is bound to the rope. A "hard-bread" crate may not be handy for my readers, but a slatted cylinder is an easy thing to make. To make the round end or wheel (*A B C D E F G H*), it is first necessary to have a square piece of plank; then saw off the corners (*H-G F-E D-C A-B*), as shown by the dotted line in Fig. 199. The

corners may again be cut off, as shown by the finer inside dotted line, and your wheel is done. But for the ends of the spool of Fig. 201 we need a square hole through the centre of the wheels, as shown by the dotted line at *U* (Fig. 199). To get the centre of a square, rule two diagonal lines from corner to corner. Where they cross each other at *U* will be the centre of the square. Now then, if we make this wheel out of two pieces of board instead of one, as shown in Fig. 199, it will be an easy matter to cut a square hole in the centre at *U* with a saw, after which the pieces can be held together by two cleats (*K J*), nailed to the end piece, as shown in Fig. 191. *R S T* of this figure are the tin cans. *L L* are two cleats nailed over the notches in the upright posts. Fig. 198 is a side view showing how this is done. A hole bored through the post where the small end of the shaft comes through would answer the purpose as well as a notch, but we must resort to the notch at the other end, for, as the reader may see, the shaft has square corners, and it is only trimmed down (*P*, Fig. 201) where it bears on the upright. The handle to the windlass (*M O*, Figs. 191 and 200, on page 150) is made so that *M* fits astride of the shaft, and *O* is nailed to the bottom.

This machine can be constructed by any bright lad of eight years or more. It may be made very useful on a farm, very convenient for the camp located on the bank of a stream, and a source of endless amusement and fun for an S. D. B. Fort or a house in the trees. It may be used also to fill an elevated water-tank or a barrel or a cask which is used to supply the little fountain in your fish-pond. In fact, there are many ways in which this can be used which will

appeal to the practical mind of any American boy. It can be run by any sort of an engine or windmill and made to carry water, sand, gravel, or any sort of material fine enough to be scooped up, and I hope that it will supply a long-felt want to the reader, who may be able to put it to more uses than I have mentioned.

CHAPTER XII

HOW TO TALK THE REAL AMERICAN INDIAN SIGN LANGUAGE AS IT WAS USED IN BOONE'S TIME

EVERY American boy knows that holding up two front fingers means "let's go swimming," or, as the case may be, "I am going swimming"; but this is about as far as boy sign language goes, but every Son of Daniel Boone should be acquainted with the American Indian sign language, or at least enough of it to make himself understood by his companions. There are, however, but few white men left in this country who could teach them this language, and they are all elderly men, so it is "up to the boys" to learn *now*, so that the art may not be forgotten and entirely lost.

I know the boys will learn this language as soon as they have an opportunity, if for no other reason than the fun they can have with it. With the sign language they can exchange confidences right before the grown folks, and the latter will not have the least idea what the boys are talking about. To begin with, then, we will take that object which attracts the most attention in the daytime.

1. SUN.—Hold up the hand with the thumb and first finger together in the form of a circle (Fig. 202).
2. HEAT.—The two hands raised as high as the head and bending forward horizontally with the points of the fingers curving a little downward (Fig. 203).

3. FIRE.—The two hands brought near the breast, touching or approaching each other and half-shut, then moved outward with a moderately quick motion, the fingers being extended and the hands a little separated at the same time, to imitate the appearance of flame (Fig. 204).

4. SMOKE.—Begin with the sign of fire (Fig. 204), then

Fig. 202.—Sun

Fig. 203.—Hot, Heat

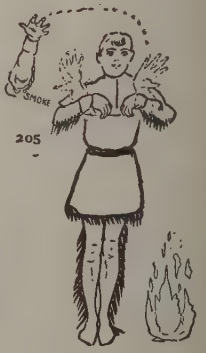


Fig. 204.—Fire

raise the hand upward with the fingers open (Fig. 205).

5. NIGHT.—Bring the two hands together with the fingers extended across one another as if to shut out the light (Fig. 206).

6. MOON.—The thumb and finger open are elevated toward the right ear (Fig. 207); this last sign is generally preceded by No. 5, the sign of night or darkness.

7. EARTH.—The two hands open and extended, brought horizontally near each other opposite either knee, then carried to the opposite side and raised in a curve movement until brought around and opposite the face (Fig. 208).
8. AIR.—The right hand held perpendicularly upward and

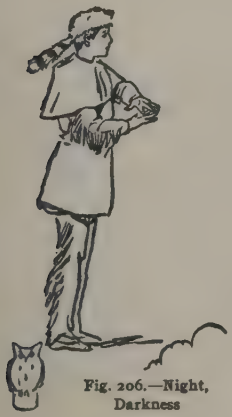


Fig. 206.—Night, Darkness

Fig. 207.—Moon

brought forward with a shaking, tremulous or vibratory motion until it passes beyond the face (Fig. 209).
9. COLD.—The sign of air may also mean cold, but if you want to say:
10. SOMEBODY COLD.—Hold up your right fist opposite the shoulder and shake it as if you were shivering (Fig. 210).
11. I.—If you bring your fingers down and lay them against your breast, that stands for "I."

12. I AM COLD.—"I" combined with No. 9 means "I am cold" (Fig. 211).
13. WATER.—Group your fingers together so as to form a bowl with your hand, then bring your hand upward as if you were conveying the water to your mouth to

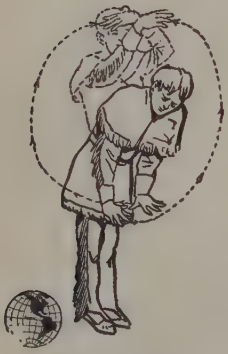


Fig. 208.—Earth

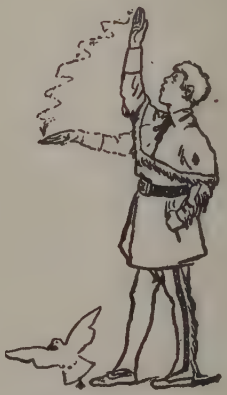


Fig. 209.—Air, Wind

drink, but let the hand pass up by the mouth and not stop at it (Fig. 212).
14. RAIN.—Begin with the sign of water, then raise the hands even with the forehead, extending the fingers outward, and give a shaking motion, to represent the dripping of water (Fig. 213).
15. EGG.—Hold the hand with the back down and the fingers brought together, as if they were holding an egg (Fig. 214).

16. STONE or HARDNESS.—Beat the palm of your left hand with your right fist (Fig. 215).
17. WHITE.—Open the left hand and with the fingers of the right hand rub the place between the thumb and first finger (Fig. 216).
18. HAIL and SLEET.—First make the sign of rain (Figs. 212 and 213), next give the sign of cold (Fig. 210),

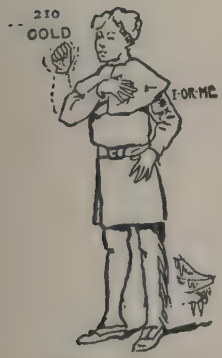


Fig. 211.—I Am Cold

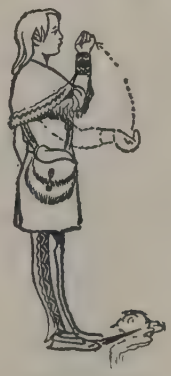


Fig. 212.—Water

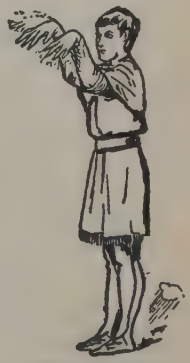
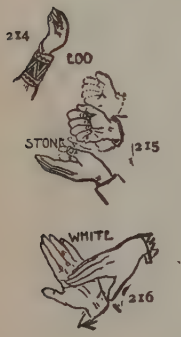


Fig. 213.—Rain

then give the sign of hardness (Fig. 215), and, lastly, give the sign of the egg (Fig. 214). What you have now said is: That it was, or is, raining; that it was, or is, cold; that the rain is hard like a stone and shaped like an egg; in other words, that it is hail and rain. Thus, you see, by combining these signs, you can convey almost any idea.

19. SNOW.—Begin with the sign of rain (Fig. 213), then make the sign of air or cold (Fig. 209 or 210), and conclude with the sign of white (Fig. 216).

20. ICE.—Begin with the sign of water (Fig. 212), then of cold (Fig. 210), then the earth (Fig. 208), and, lastly, a stone (Fig. 215).
21. SPRING SEASON.—The sign of cold (Fig. 210 or 209), to which add the sign of being done or finished. (See last paragaph of this chapter.)
22. FROST.—Begin with the sign of water (Fig. 212), then



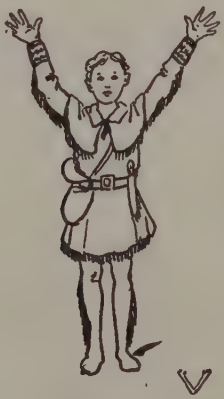


Fig. 217.—Clear

Fig. 218.—Cloud

the sign of night (Fig. 206) or darkness, then the sign of cold (Fig. 210), then the sign of white (Fig. 216), and, lastly, the earth (Fig. 208).

23. CLEAR.—The hands are spread, uplifted and extended both ways from the head (Fig. 217).
24. THUNDER.—The sign of rain (Fig. 213) accompanied by the voice imitating the rumbling noise of thunder.

25. LIGHTNING.—First give the sign of thunder, then separate the hands, and, lastly, bring the right hand down toward the earth right in front of you.
26. CLOUD.—Begin with the sign of water (Fig. 212), then raise the two hands as high as the forehead, and, placing them with a slight inclination, let them gently cross one another (Fig. 218).
27. BIG, GREAT, or LARGE.—The two hands placed

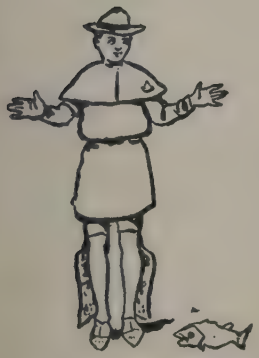


Fig. 219.—Big, Large, Great

Fig. 220.—Fear, Fearful

Fig. 221.—Many

wide apart on each side of the body, and moved forward (Fig. 219).

28. FEAR, TO BE AFRAID, TO CAUSE FEAR.—The two hands with the fingers turned inward opposite to the lower ribs, then brought upward with a tremulous movement, as if to represent the common idea of the heart rising up into the throat (Fig. 220).

29. TORNADO.—First make the sign of air (Fig. 209), then of large or great (Fig. 219), and then the sign of fear (Fig. 220).

30. MANY or MUCH.—The flat of the right hand patting on the back of the left hand, which is repeated in proportion to the greater or lesser quantity (Fig. 221).

Fig. 222.—Man

Fig. 223.—Woman

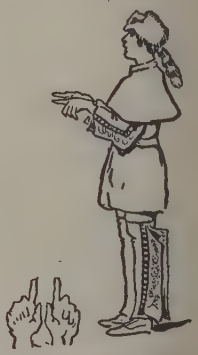


Fig. 224.—The Same, Alike

31. MAN.—With the forefinger of the right hand extended and the hand shut, describe a line beginning at the pit of the stomach and passing down the middle of the body as far as the hand conveniently reaches, holding the hand there a moment (Fig. 222).

32. MALE or FEMALE.—To distinguish between the male and the female, in all cases add for the male a fillip with the forefinger of the right hand on the cheek,

and for a woman bring the two hands open toward the breast, the fingers approaching, and then move them outward (Fig. 223).

33. BOY.—Bring the fingers and thumb of the right hand to touch the lips, then make the sign of a man (Fig. 222), and then raise the hand with the fingers upward and placed at the height of a boy.

34. GIRL.—Begin with the sign of a boy and make the sign of a woman, and then raise the hand to the height of a girl.

35. BABY.—Place the fingers and thumb of the right hand against the lips, then draw them away and bring the right hand against the forearm of the left, as if holding an infant. Should the child be male, fillip your cheek before the last sign, and if a female, give the sign of a woman.

36. BODY.—The hands with the fingers pointed to the lower part of the body and then drawn upward.

37. HAIR.—The movement of combing.

38. YOU.—The hand open, held upward slantingly and pointing forward.

39. WHAT DID YOU SAY?—Make a gesture with the palm of the hand upward and carried circularly outward and depressed.

40. HE or ANOTHER.—The forefingers extended and the hand shut, the forefingers brought over one another, or nearly touching, and then separated moderately quick.

41. GO.—The back of the hand stretched out and upward.

42. COME.—Forefinger moved from right to left with an interrupted motion, as if imitating the alternate movement of stepping.
43. COME HERE.—The hand stretched outward with the palm under, and brought back with a curve motion downward and inclining to the body.
44. MINE.—Hand shut and held up to view, as if you had something in it.
45. KNOW.—The forefinger of the right hand held up nearly opposite the nose, and brought with a half-turn to the right and carried a little outward. Place any of the articles before the last sign, which will then signify, I know, he knows, you know. Both hands being made use of in the manner described, implies to know much.
46. NOW or AT PRESENT.—The two hands forming each a hollow and brought near each other and put into a tremulous motion upward and downward.
47. WHAT SAY YOU?—Make the same gesture given in No. 39.
48. NO, NOTHING, I HAVE NONE.—The hand held up before the face, with the palm outward, and vibrated to and fro.
49. FROM WHENCE COME YOU, SAY.—First the sign of you, then the hand extended open and drawn to the breast, and, lastly, the sign of "What say you?"
50. HOUSE, TEPEE, TENT.—The hand open and the forefinger extended and separated, then, raising the hand upward, give it a half-turn as if twisting something.

51. HORSE.—The right hand with the edge downward, the fingers joined, the thumb resting on hand, extended forward.

52. MAN ON HORSEBACK.—Make sign of man and sign of horse, then put your first two fingers of the right hand over left hand, like the legs of a man riding astride of a horse.

53. DEER.—The right hand extended upward by the right ear, with a quick puff from the mouth.

54. BOW.—The left being a little extended, the right hand touches it and makes the motion of drawing the string of the bow.

55. GUN.—Make a motion like taking aim with a gun.

56. ALIKE, SAME, or SIMILAR, to what went before.—Place the two forefingers parallel to each other and push them forward a little (Fig. 224).

57. BRING, FETCH, or GIVE ME.—The hand half-shut, with the thumb pressing against the forefinger, being first moderately extended either to the right or to the left, is brought with a moderate jerk to the opposite side, as if something was pulled along by the hand.

58. GIVE ME WATER.—The sign of water before the preceding sign.

59. COW or BUFFALO.—The two forefingers brought up to the side of the head and extended outward so as to represent the position of the horns.

60. PHEASANT, GROUSE, or BARN-YARD FOWL.—Bring the thumb and fingers of the right hand together and, holding the hand moderately elevated, move

them in front of you, imitating the motion of the head of a cock in walking.

61. BIRD.—The open hands brought up opposite the shoulders and imitating the motions of the wings of a bird.

62. TURKEY.—Make the sign of a bird, then of a barn-yard fowl.

63. SWIMMING.—Extend the forefinger of the right hand outward and move it to and fro.

64. DUCK.—The sign of the turkey, then the sign of water, and, lastly, the sign of swimming; that is, a bird that swims.

65.—The hands placed edge up and down, parallel to each other, the right hand without, which latter is drawn back as if cutting something, means Done or Finished.

CHAPTER XIII

NOVELTIES FOR CROCKETT'S DAY

How to Run a Costume Race, a Leap-Frog Race, a Wheelbarrow Race, and a Push-Wagon Race

WE have learned how to celebrate Appleseed Johnny's Day, Kenton's Day, Audubon's Day, and now we are ready to celebrate Davy Crockett's Day. The gay, rollicking, absolutely fearless Davy Crockett was born on August 17, 1786, and this will make a splendid Midsummer Field Day for the Sons of Daniel Boone. A celebration of this kind, to be successful, requires considerable preparation and training. It is none too early to begin a month or two ahead of the date.

Invite any neighboring Forts to meet with you on that day, or on the half-holiday nearest to that day, to engage in pioneer field sports. If there are no Forts close at hand with which to compete, invite some of the local athletic or school organizations to meet you and compete for a championship in a pioneer game. In order that you shall have a most entertaining time, your Founder has adapted a unique lot of the pioneer sports for you to use upon that date.

If there was one peculiarity about the old frontiersmen, it was their ability to do things and do them on the jump. They were good at the hundred-yard dash and the long-

distance run, and some of them, like the Wetzel brothers, could load and fire and reload their awkward, long-barrelled, flint-lock rifles while they were on a dead run pursued by savages. We want the modern Sons of Daniel Boone to be as quick as their forebears in thought and action, and the Dressing Race is a test of this sort of ability.

Measure off a course of three hundred yards for the race-track; have a starting line, and a very distinct line at the first

Fig. 225.—Getting into Their Shirts in Costume Race

hundred yards drawn across the track, another distinct line at the second hundred yards drawn across the track, and before the race let each contestant spread his wammus out flat on the ground at the first hundred-yard line. If the contestants have no Boone uniform, and consequently no hunting tunic, they can use flannel shirts for this occasion, and spread them out, back downward and arms extended, along the line marked on the track (Fig. 225). The shirts should be placed in the same relative position that the racers

occupy at the starting line. Under each shirt, at the waist, spread out a leather buckled belt. At the second hundred-yard line let each contestant place his hat (Fig. 226). The third hundred-yard line is the finish. The racers start with their running clothes on at the report of a starter's pistol. When they reach the first hundred yards each racer must seize his own wammus, or shirt (Fig. 225), put it on, button it up, put on the belt, and buckle it before he reaches the second hundred yards, or, properly speaking, before he

Fig. 226.—Approaching the Hat Line—Costume Race

leaves the first hundred-yard mark. Then he dashes away for his hat at the second hundred-yard line, grabs that, and puts it on his head, then tears away to beat his opponents at the finish line. To win in this race the contestant must cross the line with his shirt buttoned up to the neck and at the cuffs, his belt buckled around the waist, and his own hat on his head.

There will be all sorts of fun and laughable incidents in this contest, and it will keep the spectators in a merry mood for some time.

It is foul to interfere with each other while running or dressing, or to kick or misplace one's opponents' shirts, belts, or hats. There must be a judge at the start, a judge at the shirt line, another at the hat line, and a judge at the finish, to see that the race is conducted fairly.

The next contest is the Leap-Frog Race (Fig. 227). This is run in teams of from three to six on a side.

If, for instance, we have Sons of Daniel Boone against four Boy Pioneers, three of the Sons of Daniel Boone line up,

Fig. 227.—The Leap-Frog Race

one in front of the other, the last one toeing the starting line. The Boy Pioneers line up in the same manner. At the word "Go," the racers who have lined up give a "back," as in leap-frog, and the fourth man of both the Boy Pioneers and the Sons of Daniel Boone proceed as quickly as possible to jump over the three backs and himself gives a "back" where he alights on the last jump. The last one of the three follows as quickly as possible, and he is followed by the second one, and the third, and so on, until they reach a mark drawn across the track, about seventy-five yards from the finish. Here every jumper, as he alights,

makes a dash for the finish, and the side wins which has the most men over the finish line in the quickest time.

The Wheelbarrow Race is run by teams of two each. Any sort of a stout wheel with a stick thrust through it for a shaft (Figs. 228, 229, and 230) is grasped by the human

The Wheelbarrow Race

wheelbarrow on each side of the hub of the wheel (Fig. 228). The other boy now takes the legs of the wheelbarrow as handles, and in this way trundles his companion over the course. To prevent the hub of the wheel from rubbing the barrow's hands, pieces of leather or of thick pasteboard, such as shown in the diagrams (Figs. 229 and 230), are pushed down on the axle on each side of the hub for guards.

All these games will require preliminary practice, and you will find it will not be wise to make the wheelbarrow race too long. You will also discover various little points in the contest which will require rules and regulations to govern them. But you will have lots of fun on the practice field, and the spectators will have more than their share of fun on the field day. The air will resound with the cries of the contending organizations, of the waugh, waugh, waughs of the Sons of Daniel Boone.

Next come the real woodsmen's tests, for be it known that the Son of Daniel Boone who can win the observation race, the hawk-eye test, and the notch for the sign language is a boy possessing all those qualities which make a woodsman scholar and a successful man.

We are following in the footsteps of old Mother Nature, for she makes the play of all small animals a schooling for the pursuits of their mature life. To make the Davy Crockett Midsummer Field Day a success, enlist the sympathy of your parents and teachers, and if your Fort is in a big town or city, go to the mayor or councilman, and obtain permission to make your camp for that day in the public park. In this political work you will find your parents and teachers of great assistance in showing you how to go about securing the required permission, and if you approach the officials properly you will find that even the toughest politician has a soft place in his heart for the boys. If, however, you live in a small settlement, there are open fields and pastures all around within reach where you can pitch your tents, and make a corral of your prairie-schooners for head-quarters and dressing-rooms for the athletes.

Wherever you have the space to do so, make your camp in the centre of an oval tract. The camp ground should be protected by a fence made of a rope attached to upright sticks. The spectators can camp and picnic upon the outside edge of the race-track, where they will have a full view of all the events. These may comprise all that are usual in athletic contests, but particular attention must be paid to such tests of skill as are peculiar to our order, many of which have already been described in the previous chapters of this book.

The most exciting race of the meet is often the one run with the prairie-schooner with the hoops and canvas removed. The course for this race should be over ground which has both hills and level stretches. Each schooner has a crew of two—one to push and one to steer. In going over the level ground, one boy runs behind, with his hands upon the pusher, shoving the cart, while the other one steers by means of the strings attached to the front axle. When they reach the brow of a hill, the pusher is allowed to drop the pusher flat on the cart, and the boy who has been running behind leaps aboard and coasts down the hill. The crew must arrange between themselves when to change places, for one boy cannot push the cart through the whole race with any hope of winning. The changing places by the boys requires considerable practice; it can then be done without any apparent slacking of the speed of the cart. During the change, learn to keep up the speed of the cart, and thus allow the boys to alternately rest. When you come to a down grade, both rest while enjoying the coast.

The length of the course had better be decided after

some trial trips, because much depends upon the nature of the ground where the race is run.

The next event is a very important one. It is the Observation Race. Each object accurately observed counts one point for the observer, and the best time counts three points;

Fig. 231.—At the Starting Line, with Backs to the Direction They are to Run

second best time, two points; third best time, one point; no points counted for boys coming in after this. The contestants for this race are all blindfolded, placed with their heels to the line, with their backs to the direction in which they are to run (Fig. 231), and before the bandages are removed from their eyes, small articles are placed at short intervals upon each side of the course to the finish line. The length of the course

should be adapted to the average age of the contestants. When the tomato-cans, handkerchiefs, hats, a boy with a dog, a girl with a fan, a man with a red necktie, etc., have been placed along the line, the starter cries, "Attention! Are you ready?" Then, at the sound of the report of the pistol, each lad tears the bandage from his own eyes and races down the track, using great care to mentally note every object he sees

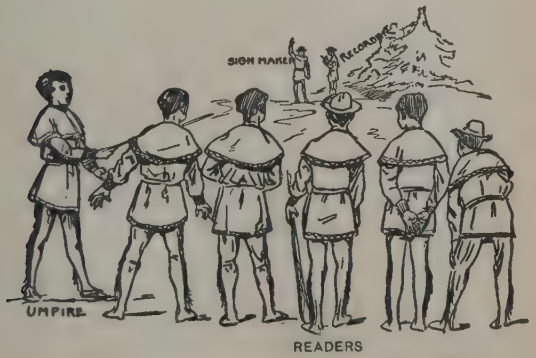


Fig. 232.—Sign-Language and Observation Competition

on either side during the run. When he crosses the finish line, he must stand with his back to the course until he has made his report to the judges. This he must do in a low tone, so that his comrades may not overhear him and be tempted to make use of his observation. The boy making the most points wins the contest. The winner's name is then announced through a megaphone.

The next new feature is the Sign-Language Contest. The contestants line up as shown in Fig. 232; the umpire stands alongside of them, to see that everything is conducted fairly,

and the sign maker and recorder place themselves about five hundred yards or more away. The recorder, who stands with the sign maker, calls out warning to be ready, or signals the boys with a handkerchief, and then the sign maker gives combinations of signs described under the head of "Sign Language," in Chapter XII of this book. When he has finished he gives the signal, and the first of the contestants, accompanied by a judge, previously appointed, meets the recorder, and tells him as nearly as he can remember what the sign man has said and the order in which he said it. No one else is allowed to speak during this time, and no remarks or suggestions are to be made, but the boy's answers are marked on the tally-sheet, with a cross for every correct answer, and an O for every incorrect one, and a one-half mark for correct ones out of the order in which they were made. The next boy follows in turn, and so on until they have all made their reports. The score is then added up, and the winner gets the sign-language notch.

The next event is the Hawk-Eye Test. The boys line up on this occasion as they did in the former. The sign man takes his position with the recorder as he did before. He has concealed in the breast of his wammus some disks about five inches in diameter, consisting of circular pieces of pasteboard or tin on which have been pasted bright-colored paper. Thus he has a red, yellow, blue, green, black, and a white disk. He also has some small objects, such as an orange, an apple, a potato, a banana, or even a kitten, a guinea-pig, or a little dog. When the signal is given and all is ready, the sign maker thrusts his hand in his wammus, pulls out one object, holds it aloft, being careful to hold it

perfectly steady for about one second, then returns it quickly to its hiding-place. When he has gone through the list of objects in his possession, time is called, and the boys make their reports as before. One point each is allowed for each of the objects correctly named when held aloft by the sign maker; one point for naming correctly the color of the red disk; one point for naming the yellow disk; three points for the blue disk, and two points for the green disk. The boy winning the greatest number of points is awarded the hawk-eye notch.

You can make a big success of this occasion if you work for it, and if it is a big success it will be the talk of the town, besides which you will have had the time of your lives.

Now, get together, boys; lay out your plans for field day; then every lad stand on his feet, give three cheers for our bully old pioneer ancestors, three more for the President of the United States if you live in the United States, or for the Premier of Canada if you are Canadians, and end up with the club yell, then get to work on your plans for the mid-summer campaign.

CHAPTER XIV

HOW TO THROW A TOMAHAWK AND MAKE TARGETS FOR FIELD TOURNAMENTS, AND HOW TO INITIATE NEW MEMBERS IN YOUR CLUB OR FORT

IN the good old days when our brave pioneer ancestors carried long rifles with barrels made of imported horseshoe nails, the wooden stock trimmed with brass and ornamented with eagles, 'coons, deer, and other objects cut from shells and set into the wood, they also carried tomahawks. Trusty tomahawks in the leather belt which encircled the waist and belted in the wammus—and, like their neighbors, the redskins, many of the picturesque old fellows were expert in the use of these little camp axes as weapons of offence and defence.

Weapons of Pioneers

But the great Daniel Boone himself carried a small camp axe, almost the same as we use now (Fig. 242 shows modern camp axes with leather belt sheath), and the trees he blazed with this tomahawk to mark the boundaries of land were so well known as "Boone trees" that in after years lawsuits were decided by the identification of the blazed boundaries as the ones made by the stroke of Boone's tomahawk.*

* This identical tomahawk of Boone's, along with one of Boone's traps, is now in the possession of a gentleman in Ohio.

When the writer was a small lad in Kentucky, it was the ambition of the boys, not to go and kill Indians, but to be able to throw a tomahawk with the skill and accuracy of our pioneer forebears, and the ability soon acquired by the boys in throwing hatchets at targets was really remarkable. They would come up to within thirty feet of an old board fence with a whoop and a yell, then "click! click! click!" would go the hatchets, each and every one sticking fast in the board, either in a true vertical or horizontal line as it pleased them. Ever since those glorious days of my boyhood in Kentucky it has seemed to me that throwing the tomahawk should be one of the regular feats at all American athletic meets.

Fig. 233.—Correct Position for Throw

Throwing the Tomahawk

For the benefit of the loyal scouts, I have made a series of sketches showing how to throw a hatchet, camp axe, or tomahawk, so that with a little practice the reader can astonish his friends with his skill in handling this truly American weapon. The practice is a splendid out-door exercise, and one that trains the eyes and muscles even better than archery. Furthermore, the skill thus acquired may prove of signal service to any of the boys whose business or pleasure in after life takes them into wild and unexplored wildernesses, for a well-thrown camp axe will split the skull of as large a monster as the grizzly bear.

When the youngsters first took up the tomahawk as a

plaything, of course they were very awkward in its use. There was no one to show them, and no book like this to tell them how to do anything they wanted to do, so they had to learn from experiments. It took a long time to find out how to hold the implement as shown in Fig. 233. Each lad, without exception, began by grasping the handle of the hatchet any old way, swung it in a curve, and let it go while the blade was in a diagonal or slanting position. This would send it wobbling through the air like a boomerang, with poor results as to marksmanship, and no power to stick into the mark, for, even when the blade by chance hit the mark, it struck across the grain and the axe fell to the ground. But at last we learned to stand firmly before the mark with our feet spread apart, the weight of the body resting upon the right leg, as in Figs. 233, 234, and 235. We also learned to take aim, not by sighting along the hatchet, but by fixing our eyes on the mark, and so holding our weapon that its edge formed part of the vertical line *A B*, Fig. 233. When the tomahawk is brought back from position in Fig. 233, over the shoulder as in Figs. 234 and 235, without turning the edge to one side or the other, and thrown from this position, the blade cleaves its way straight through the air, and the air itself tends to keep it true to its course.

234 235

Keep the Blade in a Vertical Line

How to Score a Hit

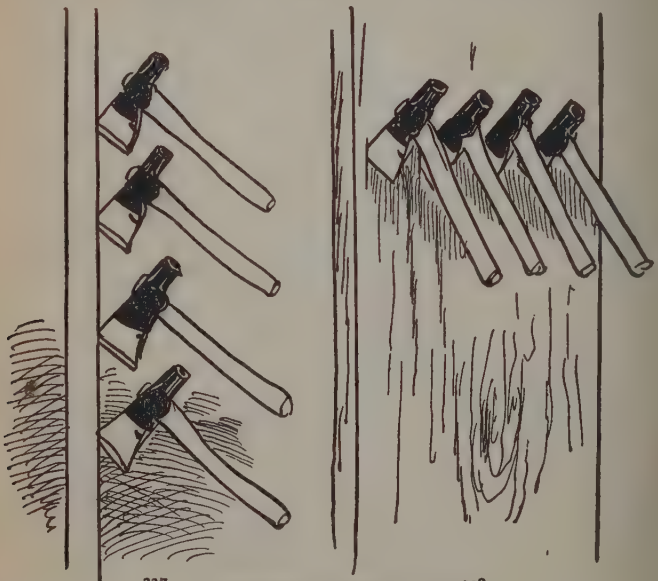
Take aim, as in Fig. 233, bring the tomahawk back over the shoulder, as in Figs. 234 and 235, then bring your hand quickly down, following the line *A B*, Fig. 233, and, swinging the body forward, let fly the tomahawk as in Fig. 236. The weapon will turn over and over, as shown by the dotted

Fig. 236.—Note How the Hatchet Strikes Its Edge between Turns Shown by Dotted Line

line in the diagram. At a distance of about ten feet it will make two turns and stick (*C*, Fig. 236). Of course, you must learn to gauge the distance so that at the end of the last somersault the hatchet will strike the target with the cutting edge, as in Fig. 236, so that it will stick.

If the distance of the throw is to be increased, one must be sure to step back far enough to allow the hatchet to make another somersault and a rise before the cutting edge can hit. It is generally safe to count on a revolution and a half to make a hit, and one soon learns to gauge this distance, and

can add or subtract a hitting distance by stepping forward or backward, as the case may be. Not only can this be done, but the novice will learn to measure a distance with his eyes, and, even at a long throw, will instinctively know



237 238

The Work of a Good Team

whether to step forward or backward in order to make a hit, and he will also know just how his hatchet will strike the target. Diagrams and talk can explain all this, but only practice can produce the skill and judgment which makes one so ready and rapid with the tomahawk that we call the action instinctive.

Team-Work in Tomahawking

After the boys in Kentucky had acquired some skill, our greatest fault in team-work lay, not in striking out of the line, but in so delivering our tomahawks as to split the handles of those already sticking in the target.

The prettiest feature of hatchet throwing is team-work, and after you have learned to send the tomahawk whirling through the air, each one quickly following the other, so that the last one strikes the target before the first ceases to quiver, all exactly in a vertical line (Fig. 237), then it is time to attempt the more difficult feat of sinking your hatchet in the target in a horizontal line (Fig. 238); but, after this is accomplished, any sort of fancy figure that you may desire may be made on the target with the tomahawks, the simplest of which is the cross (Fig. 239).

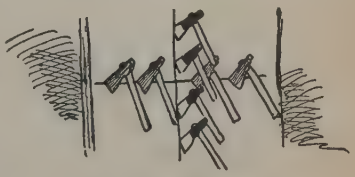


Fig. 239.—Fancy Throwing

For ordinary field work, make a target on a broad, two-inch pine plank, and do it by marking the plank with chalk, or, better still, paint the board white and the stripes black, as in Fig. 240. The breadth of the bull's-eye, that is, the centre stripe, must depend upon the skill of the tomahawkers and the distance of the throw. Fig. 240 is a target for plain tomahawk throwing. The bull's-eye counts four and the white spaces on each side three, two, and one, respectively.

Expert Tomahawking

For real expert and figure work another target is necessary. This is made of two two-inch planks, and is divided up into squares, as shown in Fig. 241. Experts are supposed, not only always to hit the vertical line, but also to hit any one of the horizontal lines they may select, and this from a distance of ten or more yards. The bull's-eye in Fig. 241 counts seventeen, ten for horizontal and seven for vertical. A throw above or below the "O" on this target takes off from one to four points from the thrower's score, as is indicated by the minus signs on the target.

Fig. 240.—A Tomahawk Target

For exhibition team-work the target should be approached upon a run, the leader or captain being a little in advance of the second boy, and the second boy in advance of the third, and so on. As the captain delivers his throw he gives a whoop, and this is imitated by each of the team in quick succession, so that they come up with a succession of whoops that are exciting and inspiring alike to players and spectators. As the last hatchet sinks its keen edge into the target, the players should be lined up like a

file of soldiers and each bring up his right hand to his cap, palm out, as in Fig. 241, and make a graceful salute by

Fig. 241.—A Bull's-Eye Hit

bringing the hand back to his side with a quick sweep of the arm.

The little cut (Fig. 242) shows the modern tomahawk or camp axe in its sheath, so arranged that it may be belted like a sword to the side of the camper or tomahawking Son of Daniel Boone.

It isn't necessary for me to tell a true Boy Pioneer that he must learn to handle his axe so as not to endanger himself or others. Care and skill in everything are the marks that characterize a manly boy.

But if you have a club to practice tomahawk throwing you should have some good form of initiation.

No hazing, no rough horse-play, but just pure fun such as any lad can indulge in without danger of parents, guardians, or teachers making a protest and thus placing the club on the black list.

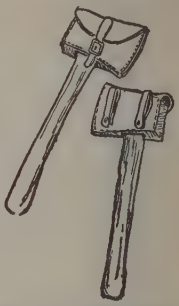


Fig. 242.—Modern Camp Axes and Sheaths

The following ceremony is made for the SONS OF DANIEL BOONE, but it can be altered to fit any sort of boys' club. For instance, in the part where the candidate unwittingly chooses a name for himself, if it is a literary club he can be asked which author he likes best, Dickens or Mark Twain, etc., and his choice gives him his club name. If it should be a debating club the question can be, "Which do you like best, Lincoln or Webster?" etc. The weeping diamond from Ponce de Leon's "Spring" may be called the philosopher's stone, and the hand of Girty the mummy hand of Pharaoh. With such changes and like changes in the titles of the officers, this form of initiation will do for a social, a literary, a debating, a church, or a nature club, and by whatever society it is adopted it will make lots of fun, and at the same time be educational in its use of names of authors, statesmen, plants, animals, poets, artists, or pioneers.

A NEW FORM OF INITIATION FOR THE BOY PIONEERS OR THE SONS OF DANIEL BOONE

WHICH, WITH ALTERATIONS, WILL DO FOR ANY BOYS' CLUB

The whole idea of this initiation is to have some mystery and fun, not to frighten the candidate or to be rude or rough with him. The more orderly the initiation is conducted the more effective it will be, and consequently the more enjoyable.

The tenderfoot candidate should be blindfolded outside the Stockade, club-room, or FORT and led by two guides (Kit Carson and Simon Kenton can perform this duty). Johnny Appleseed is door-keeper to the FORT, and he opens the door only in answer to a Johnny Appleseed knock, which consists of a rap for each syllable in his name, which makes two sharp raps, a pause, and then three more in quick succession.

In reply to the secret signal Johnny Appleseed gives the Boone call, "Who—ah!" which is answered by the guide with the same call, "Who—ah!" Appleseed, from the inside, then calls, "Who knocks, friend or foe!" The two guides reply together, "Friends."

The door is then opened just far enough for Johnny Appleseed to peer out and see the stranger with the guides. "Have you a prisoner, friends?" cries Johnny, and the guides reply, "No prisoner, but a tenderfoot who wants to join our great order."

Johnny Appleseed then opens wide the door and calls

in a loud voice, "Enter, scouts, and bring your tenderfoot before the secret council!"

During this ceremony there must be absolute silence, no whispering, giggling, or shuffling of feet.

The guides now lead the tenderfoot around the council chamber three times and stop, facing Daniel Boone.

BOONE.—Tenderfoot, we have been told that you wish to join our Fort, that you are willing to promise never to betray our friendship or our secrets. Is our information correct?

The tenderfoot, instructed by his guides, replies "Yes."

BOONE.—Before admitting you to our brotherhood there are certain questions you must answer. Do you carry concealed weapons of any kind?

TENDERFOOT.—No.

ALL THE FORT IN UNISON.—This lad has *no arms*. SO—LET—IT—BE—RECORDED.

BOONE.—Have you a fowl concealed about you, its breast, wings, or legs?

TENDERFOOT.—No.

FORT ALL TOGETHER.—This lad has *no legs*. SO—LET—IT—BE—RECORDED.

BOONE.—Maybe you have got rid of the chicken's body, but it is important for us to know if you have any part of it, its gizzard, craw, neck, or head?

TENDERFOOT.—No.

FORT IN UNISON.—This lad has no arms, no legs, no gizzard, craw, neck, or head. SO—LET—IT—BE—RECORDED.

BOONE.—O headless one, without arms or legs, body only of a lad, tell me which you would rather eat, a porcupine or a pack rat?

Or he may say a buffalo or a badger, or give him his choice between any two American animals, a timber-wolf or a coyote, etc.

The first questions are to make fun for the Fort, but the last question is asked so that the tenderfoot will, without knowing it, give himself a name. For instance, if he chooses porcupine, and his real name was Peter, then the Fort repeats, "He eats porcupine. SO—LET—IT—BE—RECORDED." Thereafter, among the Boone boys, he is known as Porcupine Pete. In this way all the new members acquire Good Wild and Woolly names.

Audubon has prepared a piece of ice which he has rolled around in his warm hands until it is smooth and about the size and shape of an egg. This has been wrapped in a piece of cloth to prevent its melting away and placed on the table. An old kid glove filled with wet sand and kept on ice rests on a plate alongside and also another plate with an ice-cold, fresh oyster and a knife and fork alongside of it.

DANIEL BOONE.—O legless, headless, and armless tenderfoot, we have here the weeping diamond from Ponce de Leon's Fountain of Youth, which stands for loyalty, truth, and honesty; also the mummy hand of the renegade Simon Girty, which stands for treason and brutality. Hold out your hands, you armless one, to receive the tests.

Simon Kenton places the ice egg in one out-stretched hand and the cold, damp glove in the other.

ALL IN UNISON.—This will test your sand and the result will be recorded. Who—ah!

BOONE.—Hold your hands steady, O armless one, for the steadiness of your hands indicates your character.

The tenderfoot, having his eyes covered by a handkerchief, will not have any idea what the two cold things are in his hands, and probably neither hand will be very steady. Boone, however, must make believe that the hand holding the sacred weeping diamond from Ponce de Leon's Fountain of Youth is perfectly steady.

Boone then cries in a loud voice, "Fellow-scouts, the headless one has proved his nerve. So—let—it—be—recorded! Who—ah!"

A chair is now drawn up before the table and, the tenderfoot being seated, Boone commands him to eat the frozen eye of the fish-god of the Siwash. The fork and knife being given to the candidate, and the cold, fresh oyster set before him, he is commanded to eat.

BOONE.—O headless one, eat of the frozen eye of the fish-god of the SIWASH.

This will cause great merriment among the scouts, but all laughter must be smothered with the solemnly repeated "Who—ah! Who—ah!"

There is not one person in a hundred who will guess that the frozen eye is nothing but an oyster, and if the tenderfoot manages to force any of the morsel down his throat he is, indeed, a brave lad. But he must not be compelled to swallow the oyster. Force must not be used at all during the ceremony of initiation.

After this act the blindfold is removed, and first Daniel

Boone and then the other officers of the club shake hands with the new member, call him by his new name, and congratulate him, after which all the scouts do the same thing, then all together give three cheers for Porcupine Pete, Gray Wolf Bill, or whatever his new name may be, and end up with the Pioneer or the Boone yell, as the case may be:

Wow! wow! wow!
Row! row! row!
Gosh—all—hemlocks!
Buckskin and leather socks!
Waugh! waugh! waugh!
Rah! rah! rah!
Cut a notch,
Cut a notch,
{ Give three cheers, }
{ For we're the Boy Pioneers. }

or

{ Cut—a notch—soon, }
{ For we're the sons of Daniel Boone! }
(Tiger—long drawn out)
We—want—no—mollycoddles!

After which the meeting is social and refreshments may be passed around.

CHAPTER XV

HOW TO HANDLE A GUN—A LOT OF GUN DON'TS—GUMPTION FOR CHUMPS AND TENDERFEET

THE Sons of Daniel Boone can arm themselves with bows and arrows, for among the white pioneers of the Ohio Valley there were many descendants of the old English archers who were as expert with the bow as the red men themselves. This is a fact that is little known but true nevertheless, and even to-day, in remote parts of the mountains of Kentucky and Tennessee, the bow is still used to some extent. When the writer was visiting some caves in the Kentucky mountains he met men with bows and arrows shooting fish, and when his old friend, the late Nathaniel Southgate Shaler, Professor of Geology in Harvard University, was in the same region he told the author that he met a man *hunting deer with a cross-bow!*

But if the boys do use fire-arms they must learn to do so with safety to themselves and others. Even in fun they must not aim their weapons, be they bows, guns, or toy pistols, at any person, for that is the act of a chump and not of a woodsman.

It is a good idea for the boys to have wooden guns to practise and drill with until they can learn to handle them swiftly and handily without ever once pointing them at themselves or others.

In case you use fire-arms, it is Daniel Boone's duty to see that the target is placed below a bank of earth, a bare hill-side, or some similar object which will prevent any danger to passers-by from the bullets; also, that no one shall stand anywhere near the target when it is in use. Davy Crockett should run to the target only when ordered by Daniel Boone and call out the number, returning to his place of safety before Boone gives the word for the next shot. Daniel Boone and Simon Kenton should be the policemen on this occasion, and demand and insist that these regulations be carried out to the letter.

We not only want no accident to happen through carelessness to any of the Sons of Daniel Boone or their friends, but we wish them to set an example which will be followed by other boys and thus lessen the danger and the number of accidents which are constantly happening because of the handling of fire-arms by untrained and undrilled boys and men.

Every boy is supposed to have gumption, and this chapter is devoted to an explanation of a few things which illustrate this subject. Not only the boys themselves, but the boys' parents, should possess this quality of common-sense designated by the old-fashioned word "gumption," and a few remarks to parents on this topic may not be out of place.

A Word to Parents

A boy is a boy and as such possesses different characteristics from a girl. One cannot train a boy to love dolls and such things without grave danger of making that abomination, a sissy sort of a chap, of the little fellow. All

thinking parents realize that there is no use trying to keep boys away from the water; they take to it as naturally as young ducks; but it is *necessary* to teach them to swim. Neither is it wise to try to keep fire-arms out of the hands of your sons, for as long as fathers and uncles go hunting, and as long as soldiers parade the streets, boys will manage to carry fire-arms in imitation of their elders. The sane, safe, and conservative way is to impress upon the boys the fact that fire-arms are deadly weapons made for the express purpose of *killing*. Teach the lads to fear and respect weapons of all kinds, and so to handle fire-arms that never under any circumstances shall the weapons, loaded or *unloaded*, be pointed at any object which they do not intend to shoot.

Teach the little fellows how to load, unload, and fire pistols, revolvers, and guns without endangering their own lives or those of any one else.

The Advantage of Looking Like a Moose

It is only because the writer looks more like a moose than a deer that he is to-day able to be talking to the boys. A few seasons ago he was in the Maine woods when the forests were filled with so-called sportsmen, and in order to protect himself from reckless men who shoot at everything that they see moving he wore a flaming red sweater. He himself was hunting with a camera, and one day after crawling through a windfall he seated himself upon a log at the edge of a lake and, as he was hot, he removed the brilliant-hued sweater, but still considered himself safe, as he was seated in an opening in the bright sunlight. As he was mopping the perspiration from his face he saw a canoe con-

taining two men approaching. As they came paddling over the lonely waters the writer suddenly became aware of the fact that he was observed by the men in the canoe and that they had ceased paddling and were reaching for their guns! This was too much for his composure, and he leaped from his seat and wildly waved his hat as a signal to the men.

It happened, as he afterward learned, that one man insisted that the author was a deer, while the other restrained his companion by stating emphatically that the writer was a *cow moose!* This undoubtedly saved his life, because, although the deer season was open, the game-warden was known to be in the neighborhood, and it was still unlawful to kill moose, especially a *cow moose*, and he who killed one subjected himself to a heavy fine.

This and other more harrowing incidents which occurred that season, and which occur every season, impressed upon the writer's mind the fact that the lad who has been carefully kept from handling a gun, and who consequently has never learned the proper use of fire-arms, becomes the dangerous man with a gun. It is such boys of whom we constantly read as either shooting themselves or their companions.

Don't pull the trigger until you're sure you know what you are shooting at. A number of men are in their graves now because some reckless hunter took them to be a deer or even a 'possum among the bushes.

Don't shoot even near the direction of any one in the woods, as a glancing bullet may strike him quite a distance to one side of the object at which you aim.

Handling a Gun

To prevent one of the most common of accidents, DON'T TAKE A GUN BY THE BARREL to pull it from a wagon, canoe, or to drag it through a fence, as is the common practice, and as the man in Fig. 243 and the lad in Fig. 244 are doing. This suicidal habit is the cause of many fatalities every season. In handling a gun, as in Figs. 243 and 244, the hammer or trigger is very liable to catch against some obstruction and to discharge the piece full into the hunter's body with fatal results.

Fig. 243

No matter how great the hurry, remember that the danger of accidents of this kind is too great a risk to take for the chance of a shot at game of any kind.

Don't lean on your gun.

Don't point your gun toward your dog.

Don't rest the muzzle of your gun on your toes.

In removing a gun from a boat or any sort of vehicle take the piece by the butt end, being careful that the muzzle does not point toward any one else.

In climbing a fence use some gumption, and first care-

fully put your gun over the fence with the muzzle away from you, in a safe place, before you attempt to climb over yourself. Some careful sportsmen go further and make it a rule to unload a gun before climbing a fence.

Fig. 244

When two boys are walking together Indian file on the trail, the boy in the rear should carry his gun as in Fig. 245. In this position he is ready to bring it to his shoulder with a single movement, and an accidental discharge of the piece held as in Fig. 245 can do no harm to himself or his companion.

Fig. 246 shows the proper manner for the man in the front to hold his gun. Here, also, an accidental discharge of the piece can do no harm to either of the lads, and at the same time the weapon is in such a position that it may be instantly brought to the shoulder at the first appearance of game.

Simple Precautions

These are precautions so simple that it seems almost unnecessary to urge them, and yet every season I see boys, and even grown men, walking along the trail in single file, those in front with their guns over their shoulders in such a position that every time a barrel is lowered to dodge a

low, overhanging branch a muzzle points directly into the face of some one behind. Remember that the branches scraping along the barrel are likely to, and often do, strike against the hammer with sufficient force to discharge the piece.

Don't shoot toward houses or fields with long-range guns.

Be especially careful when walking over ice or slippery, frozen ground.

If you fall in going down steep hills or over rough ground don't turn your gun loose. Hang on to it, and keep the muzzle pointed the other way.

Again, I frequently see the rear hunter carrying his piece as the leader is properly doing in Fig. 246, greatly endangering the legs of the one in front.

Don't carry a gun with the muzzle pointing at any one either behind or before you.

But when two boys are walking side by side they should carry their guns as shown in Figs. 247 and 248, or with the barrels in the hollow of their arms. This will do away with all possible danger of injury to either lad. Take it for granted that

All Guns are Loaded

There is great need of gumption in the game fields, hence the foregoing precautions. As this is not, however, an article devoted exclusively to gunning, but to gumption, as shown in exigencies of all kinds, we will not treat at length the many other rules governing the handling of fire-arms. Suffice it to say that the first rule here given covers

them all, and that is, never allow a gun or pistol, *unloaded* or loaded, to point at anything which is not intended to be shot. It would be well to go even further than this, and make this rule apply to the use of toy guns, for it is training and habits formed in handling these that are apt to govern

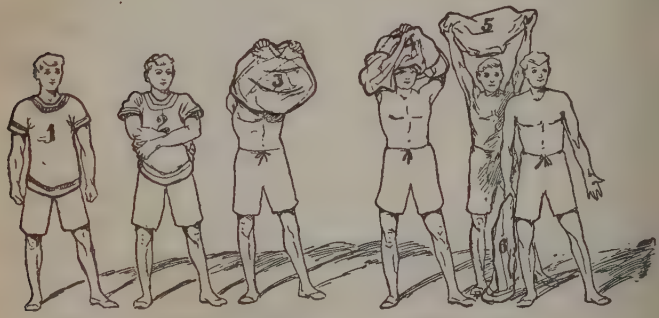
245 246 247 248

Safe Guns—Single File Safe Guns—Two Abreast

us in our use of more dangerous weapons. For practical purposes it is right to handle all guns as if they were live rattlesnakes.

Any boy or man who either purposely or carelessly points a fire-arm at another should be subjected to very severe punishment. A friend of the writer, who is well known throughout the country as a genial, kind-hearted gentleman, an explorer, crack shot, a fearless Western sheriff and talented writer, told me that whenever a man carelessly pointed a gun at him he promptly knocked the offender down. This shows how seriously real sportsmen look upon such offences, and is not mentioned here to encourage boys to use their too-ready fists, but to point out more emphatically the contempt and distrust with which real gunners look

upon chumps. But a chump is a chump, whether he be in the game field, the playground, or the school, and a chump is merely an untrained man or boy.

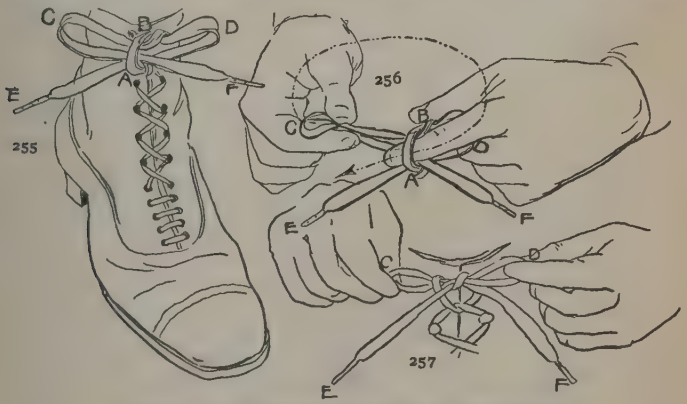


How to Take Off a Sweater

In my boating days it was always a cause of considerable amusement when a new member of the rowing club would attempt to take off a jersey or sweater. He would almost always seize the bottom hem and then find himself at a loss what to do next. Or, reaching with both hands over his shoulders, he would begin to claw desperately at his back. Athletes are a kind-hearted lot of fellows, and one of the veterans was always on hand to show the novice how to take off the garment properly. Supposing it was a short-sleeved jersey, like the one shown in Fig. 249, that was to be removed, the veteran would get it off with two movements of his arms. First he crossed his arms, reaching as far back

as he could and grasping the sweater firmly at each side, as in Fig. 250. It is then only necessary to quickly bring the arms up over the head, and at the same time bring the hands apart, and the sweater, jersey, or undershirt is turned wrong side out and is off in a jiffy.

To make this plain to the reader I have shown the two movements in a series of six figures. Fig. 251 shows arms



How to Tie Your Shoe So That It Won't Come Untied

still crossed with shirt removed up to the shoulders; Fig. 252, the arms uncrossed, but hands yet together and face uncovered; Fig. 253 shows the arms raised, hands wide apart, and the body entirely uncovered; Fig. 254, shirt off ready to put in locker.

Tying a Knot for Keeps

Then there was the fellow whose shoe was always untied until one of the older members would show him how to make a bow knot that won't come untied.

This is the way it is done: Tie an ordinary bow knot, as in Fig. 255; keep it loose, as is shown in the diagram, by placing one forefinger in the loop (*A B*, Fig. 256). Then bring the bow (*C*) up and over, as shown by the dotted line, and thrust the bow (*C*) through the loop (*A B*, Fig. 256), and you will have a bow in the form of Fig. 257. Pull the bows (*C* and *D*) until the knot is tight, and it will not again come undone. But it may be loosened at any time by a smart pull on either of the free ends of the strings (*E* or *F*).

Thus you see that gumption is common-sense and the knowing how, and that all our best athletes in school and college are boys with gumption. It takes gumption to build a tunnel under the East River; gumption to ride, sail, row, fish, skate, swim, and to be a real, first-class American boy.

CHAPTER XVI

FIXING UP THE BOYS' DEN, CLUB-ROOM, OR FORT

How to Decorate and Paper the Inside of a Shed, Attic, or Stable-Room, and How to Make Furniture for It

PRACTICALLY all suburban houses have unfinished garrets where rubbish and old trunks are stored, and, outside of the crowded business part of the city, the hived tenement section, and the fashionable avenues lined with gloomy palaces, even city houses possess unfinished apartments in attics, stables, or barns.

Inasmuch as every likely place for a den differs from every other place of the kind, it will be necessary to confine this description to such problems as are generally met with in unfinished rooms or sheds.

In the first place, if the walls are made of rough boards they may be papered; but you should first tack unbleached muslin to the boards.

Put the muslin in a tub of water and get it thoroughly wet, then stretch it tight over the boards and tack it, along the edges of the cloth, to the wood-work. If this is done properly, when it is dry the cloth will be stretched as tight as a drum-head.

If the wall is boarded on the outside of a framework of "studs" it may be finished upon the inside with any sort of

old lumber available. If you boys will save all the packing-cases and barrels that you usually burn up on election nights you will have sufficient material.

I can tell you how to make all sorts of things out of the roughest sort of lumber, but I cannot tell you how to make something from nothing. In this case, however, the material need not cost you a cent, but you must use care in knocking the packing-boxes apart and save all the nails, and in this manner you can get enough for your purpose.

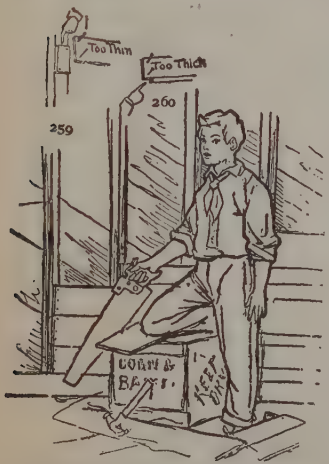


Fig. 258.—Nail the Boards to the "Studs"

Of course, the surface of the boards must not be uneven, but uniform, and this can be arranged by nailing on the boards, as in Fig. 258, to the studs.

"If a board is too thin," nail a cleat (Fig. 259) to the stud so as to bring the surface of the board even with the others. If you happen to have "a board which is too thick," cut a notch in the end which fits on the stud (Fig. 260) and thus make its surface correspond to the rest of the boards. In this way a whole inside of a room or shed may be boarded up, then covered with unbleached muslin in the manner already described, or covered with dull-red building-paper tacked on over the boards. I have pasted this paper on

the walls of a room, but it sometimes shrinks as it dries and then peels off. It is not really necessary to board up the whole room; there will be little danger of punching holes in your wall-paper where it is stretched between the studs (Fig. 262), if you have boarded the wall up a little higher than the tops of your chairs.

A Good Wainscot Can Be of Barrel Staves

Take a sharp hatchet and trim off the swell of the stave (Fig. 261, *B*) until the edge is almost straight, then plane it off (Fig. 261, *C*) so that the staves will fit together side by side, as in Fig. 261.

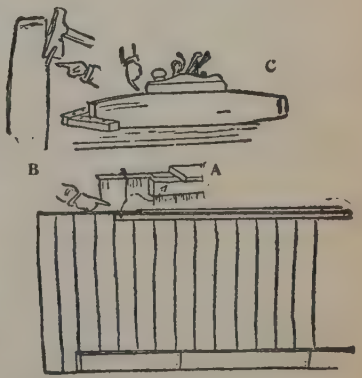


Fig. 261.—The Wainscot of Barrel Staves

Nail a piece of moulding along bottom edge against the floor, or make a base-board of smooth planks, or leave it without a base-board of any kind. Finish the top of the wainscot by neatly nailing a strip along the top edges and another strip on top of it, as in Fig. 261, *A*; but if you have no strips, leave the raw edges of the staves. This makes a unique wainscot, and if the wall above is neatly decorated with cheap building-paper or common wall-paper, the room will have really an elegant appearance.

Above the wainscot stretch and tack the wet muslin

(Fig. 262), and paper this with any sort of paper procurable. If you save the colored supplements of the newspapers and use them, you will have a most entertaining and novel wall-paper.

Fig. 262.—Above the Wainscot Stretch and Tack the Wet Muslin

You may, however, use some plain tinted paper for the walls, and then make a sort of panorama border above the wainscot.

Do this by carefully cutting out the large figures of people and animals with a pair of scissors from the colored supplements and pasting them on some gray or drab paper, brown wrapping-paper, or other unobtrusive colored background, as in Fig. 263. Above this you can make use of your collection of picture post-cards by pasting them on a line above the panorama border (Figs. 263 and 264).

No matter how dusty an attic may be or how many wasp-nests and cobwebs decorate the rafters, it may be cleaned, dusted, and swept in a few minutes, and then it is ready for the decorator. In Fig. 265 the muslin on the ceiling should be tacked across the rafters of the ceiling from one rafter to the other and at right angles with them; that is, square with them, as is shown in Fig. 264. The muslin on the wall should be tacked on in the same manner as is shown by

Fig. 262, but the wall-paper should be put on the walls up and down, at right angles with the muslin and with the floor (Fig. 264).

To Put on the Wall-Paper

Take two chairs and place them back to back and as far apart as the lengths of the paper will be which you are

Fig. 263.—The Panorama Border Above the Wainscot

about to paste. Lay some smooth boards from the back of one chair to the other, and they will serve you for a working bench.

Use a big brush made like a whitewash brush, and with this cover the long strips of paper with paste.

Spread the paper wrong side up, on the boards, and cover it with paste, daubed on with the broad brush (Fig. 262); then fold the paper up loosely into a big fold so that it may be

easily lifted from the boards, using care not to get the paste on the outside or figured part of the wall-paper. Next get on the step-ladder, and, holding the top of the paper with your two hands, fit it against the place where the ceiling and the wall join, allowing the paper to hang in the position

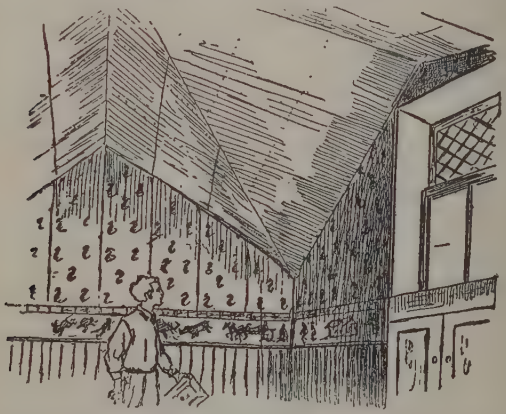


Fig. 264.—This Shows How the Muslin On the Ceiling is Tacked at Right Angles to the Rafters

it is to be pasted; put it into place and then go over the seams with a rolling-pin, if it is on a solid surface; but if it is on the muslin stretched between studs, go over it lightly with a bunched-up towel, pressing the paper onto the muslin until it sticks there, or use a big brush for this purpose. When I mount paper on cloth I have both the cloth and the paper damp, but I noticed that the decorator who was papering a place in our attic over muslin allowed the cloth to dry and then pasted on the paper.

A cottage on Big Tink Pond, in Pike County, Pa., has flour-sack cloth stretched over the inside; there are 1,500 flour sacks on the walls, and they were put on dry and not dampened until the paper was pasted over them. It is a neat piece of work, and the walls look as if they were ordinary plaster walls covered with paper, in place of rough, unfinished pitch-pine boards as they really are.

It will take another story to tell you how to furnish your den, but the boy who cannot do that for himself lacks gumption. However, all of us are aided by suggestions, and I will give you some.

How the Handy Boy Can Furnish His Own Den

Of course a den can be fitted up with the furniture which your parents may allow you to use, but there will be no fun in that and nothing that you can point to with pride as examples of your own ingenuity. What every hustling American boy wants is something that he can show his friends and say, "Look at that; I made it myself." If you will save the old packing-cases from the cook, you can fit out your den with sofas, chairs, stools, and a secretary or desk, which will cost you nothing but labor.

How to Build a Secretary

For the table or stand you will need a box about the size of an ordinary or small centre-table (Fig. 266); for the bookcase part, another box the same length as the table and somewhere near half its width. If you are to have only shelves in the bookcase, carefully measure the distances upon the inside of the box, and with a pencil rule a straight

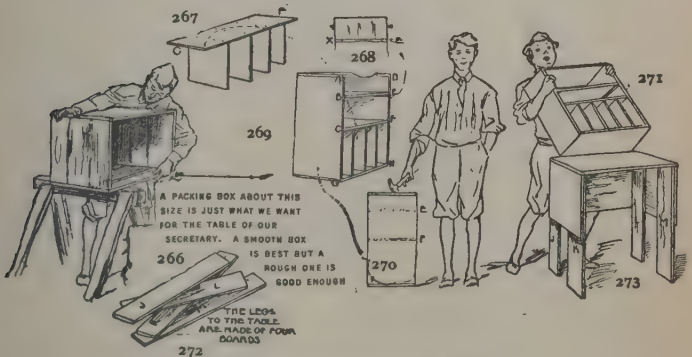
line along the side of the inside of the box where the shelf is to be. That is, suppose it is to be five inches from the top of the box to the shelf, measure five inches inside the box on the back edge of the side piece and mark the point at *X* (Fig. 268); then measure five inches along the front edge of

Fig. 265.—The Ceiling Before the Cobwebs are Brushed Down and Muslin Tacked On

the side piece and mark the point at *E* (Fig. 268). Along this line nail the cleat (*X E*, Fig. 268), then saw your shelf board or boards off so as to just fit inside the box, slide the shelf in over the cleats, as it is at *B E* (Fig. 269). In case you want pigeon-hole divisions for the lower part, make a shelf (*C F*, Fig. 267), and to this nail the division pieces, which must, of course, all be of exactly the same dimensions. The shelf (*C F*) can then be slid in place and secured there by

nails through the side of the box, along the dotted line at *F* (Fig. 270), and through the bottom of the box, where the divisions occur.

To make the table or stand to the secretary, knock off one side of the box (Fig. 266), and then take four boards (*J K L M*, Fig. 272); trim them off all exactly the same length, and nail them to the inside of the box, as shown in Fig. 273. These will make the legs of the table, but the

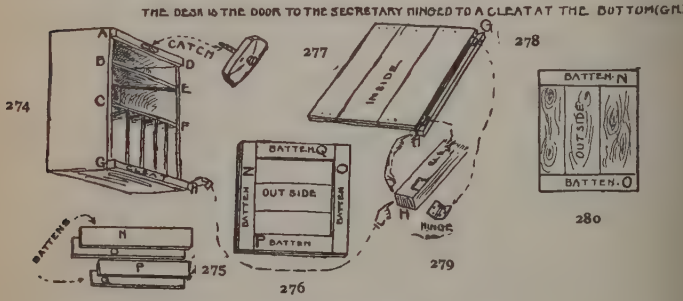

267
268
269
271
A PACKING BOX ABOUT THIS SIZE IS JUST WHAT WE WANT FOR THE TABLE OF OUR SECRETARY. A SMOOTH BOX IS BEST BUT A ROUGH ONE IS GOOD ENOUGH
266
270
273
THE LEGS TO THE TABLE ARE MADE OF FOUR BOARDS
272

This is the Way to Build a Writing-Desk

stand should be strengthened by nailing a small board across the front, just below the top of the stand, as it is in Fig. 281. If this board interferes with your knees it may be shaved off in a curve, as shown in Fig. 281. The bookcase part, of course, fits on top of the stand, as in Figs. 271 and 281. If possible, it should be the same length as the stand, as in Fig. 281, but it may be smaller and still prove very serviceable, as in Fig. 271. Of course, to be useful, this piece of handiwork should have

A Board

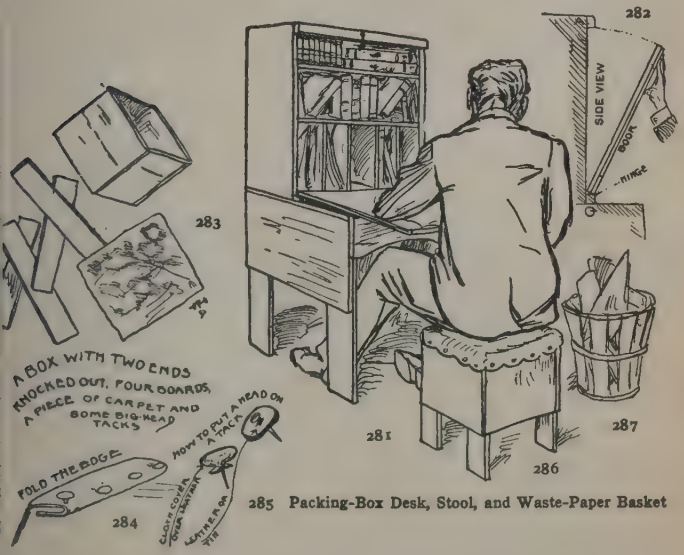
upon which to write, and this we will provide for by using the door to the bookcase for the purpose. To fit the door upon the bookcase we will need two cleats (*A D* and *G H*, Fig. 274) and a small wooden catch to hold the door when



Showing the Book-Shelves and Writing-Desk

it is closed. Make the door out of the top of the box or the boards from some other box, and cut it so as to fit between the top and bottom cleats and flush with the two sides of the case. Take the two longest boards (*N* and *O*, Fig. 275) and nail them across the top and bottom of the door for battens. Between *N* and *O* fit the two shorter battens (*P* and *Q*), as shown in Fig. 276. This will make a panel for the outside of your door. The inside of the door should be as smooth as possible, for it is upon the inside that you write (Fig. 277). Take a pair of small hinges and hinge the door to the cleat (*G H*), cutting out places in the cleat, as shown by Fig. 278, and similar places in the bottom of the door in

which to fit your hinges. The cleat (*GH*) had better be hinged to the door before the cleat is nailed to the bookcase. Remember that Fig. 277 shows the inside of the door, and in order to fit upon Fig. 274 it must be turned



285 Packing-Box Desk, Stool, and Waste-Paper Basket

around so that *G* will fit on *G* and *H* on *H*. When it is closed it will be Fig. 276 that will show, Fig. 277 being inside.

Fig. 281 shows the door let down as it is when used as a desk. Fig. 282 is a side view, showing the door about to be closed. The inside of your door should have a smooth surface, as we have already said, and this can be made by covering it with a smooth piece of paper and then

tacking oil-cloth over the paper, or you may use a large sheet of blotting-paper fastened on with thumb-tacks to cover the unevenness.

To Make a Stool

is a simple matter. Take a small box (Fig. 283) and four small boards for the legs; nail the boards inside the box, as already described and shown in Fig. 273, then stretch a piece of carpet, canvas, or any other strong material over the

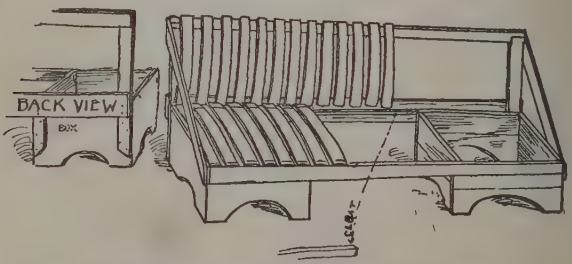


Fig. 288.—How to Make a Sofa with Stave Spring Back and Seat

top of the box. The box is supposed to have had both heads knocked out. A boy may upholster it as described further on, but we will take a box without the head and tack material over it, as shown in Fig. 286. You will probably have no big-headed tacks, but ordinary carpet-tacks will answer the purpose, and you can put heads upon them of any size that you desire by cutting out small disks of leather or tin and driving the tacks through the centres of the disks, as shown in Fig. 285. These tacks will hold the material securely, and a neat finish may be given to them by folding

a piece of cloth of some kind over the heads of the tacks and securing it in place by running the points of the tacks through the folds, as shown in Fig. 285. Fig. 284 shows how to make a neat edge to the cloth.

To Make a Sofa

Make two low stools like Fig. 286 and then nail boards across from one to the other. This will make a sort of bench

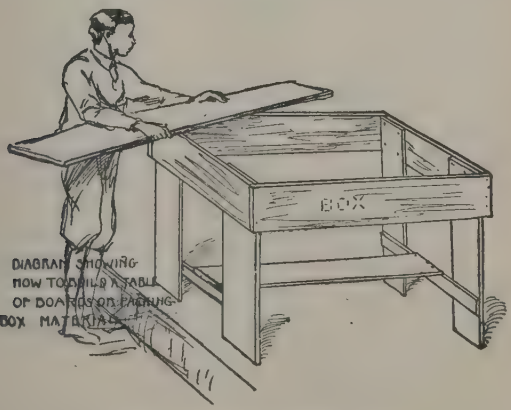


Fig. 289.—A Good, Substantial Table

which for politeness' sake we will call a sofa; but we can build a real sofa with a little more work, as shown in Fig. 288.

Fig. 288 shows the unfinished sofa, made of two boxes with the heads knocked out, a spring seat, and back composed of barrel staves. In nailing the staves on the cushion or seat, we nail them across from the top of the far side of the box to the front cross-piece, as in Fig. 288, but when we

come to the space between the boxes it will be necessary to nail on a cleat fastened to the back board for the ends

Fig. 290.—A Simply Constructed Packing-Box Chair

of the staves to rest upon. Throw a rug, blanket, or piece of thick drapery over the sofa and it is ready for use. Fig. 289 shows you

How to Make a Table

the construction of which is so simple that the diagram explains it all.

To Make an Arm-Chair

First build a stool, as in Fig. 286, putting on the legs as *J K L M N* are in Fig. 273. Then make a back frame by nailing a top piece on, as shown in Fig. 290, and nailing the long upright securely to the back of the box. Cover the box as you did the stool, and cover the back in the same manner. In tacking the cover on, fold in the edge of the material, as shown in Fig. 284, and it will give a neat finish and not ravel out. Then your den is complete.

CHAPTER XVII

SHACK RACKS, BOBBER SHELVES, AND OTHER WRINKLES

SOME Forts may be near good fishing waters, and there should then be a place for keeping the fish rods in the Fort. Every angler who possesses good rods is very particular about wiping them dry and returning them to their cases when the day's sport is finished; but in camp there comes a time when the unjointing of the rod seems a useless expenditure of labor, and the rod is carefully laid flat on the cabin floor against the wall, or worse, is set up in the corner "just for the present," but ends by remaining there all night and acquiring a curve which is most difficult or impossible to straighten again.

A Cabin Rod Rack

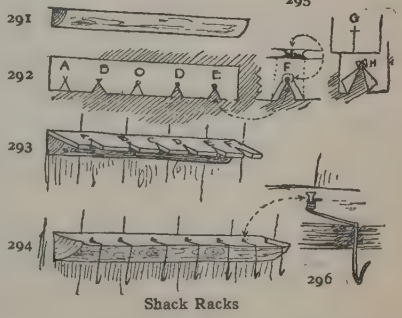
would prevent this and render it unnecessary for a tired or lazy man to unjoint his rod. In the Far West one meets with no long bamboo or cane poles such as are common to the rural districts of the East, but every one in the "Rockies" seems to possess a jointed rod; and, almost without exception, the tip of the rod is bent like the topmast of a Gloucester fisherman's schooner.

How they cast a fly with these bowed rods is best understood by themselves; but the cause of the bend is evident,

for the rods are seldom unjointed, and may be seen resting against the corners of the cabins full rigged with reel and line, the hook caught on to the reel.

A Walton Shack Rack

would prevent this, and at the same time do away with the necessity of unjointing the rod. The only difference between a cabin rod rack and a shack rod rack is in its finish; they are both made to allow the rod to be suspended by its tip, thus doing away with the necessity of taking the rod apart, and insuring thorough drying; and at the same time the weight of the butt end as it hangs pendent prevents the rod from warping much more effectually than when it is put away in its case.



Shack Racks

The rack may be made in the form of an ordinary shelf by using a quartered log (Fig. 291) for a bracket and a board (Fig. 292) for the shelf. To cut the notches *A B C D E F* (Figs. 291, 292, 293) use your jack-knife or saw it as marked by the dotted lines at *A* (Fig. 292) and cut out the wood as at *B* (Fig. 292); or use a gimlet and bore the tip holes, as shown by dotted line at *C* (Fig. 292); then cut away the wood as at *D*, after which round off the edges with your knife as at *E* (Fig. 292), an enlarged view of which is

Fig. 297.—Cabin Rod Rack

shown at *F* (Fig. 295). Make the neck connecting the gimlet hole with the notch big enough for the tip of the rod to

Fig. 298.—Section of Cabin Showing Rod-Rack Extending through Floor

pass through and the gimlet hole too small for the ring on the tip to slip through, for it is by the tip ring that the rod is to be suspended.

It is best to line or cover the notches by gluing or tacking some soft material onto the shelf, bringing it over the edges of the notches, and tacking the overlap to the under side

of the shelf. This will do away with the danger of chafing the rod tips. Take an old flannel shirt and cut it in small pieces, as at *G* and *H* (Fig. 295), then cut a cross slit, as at

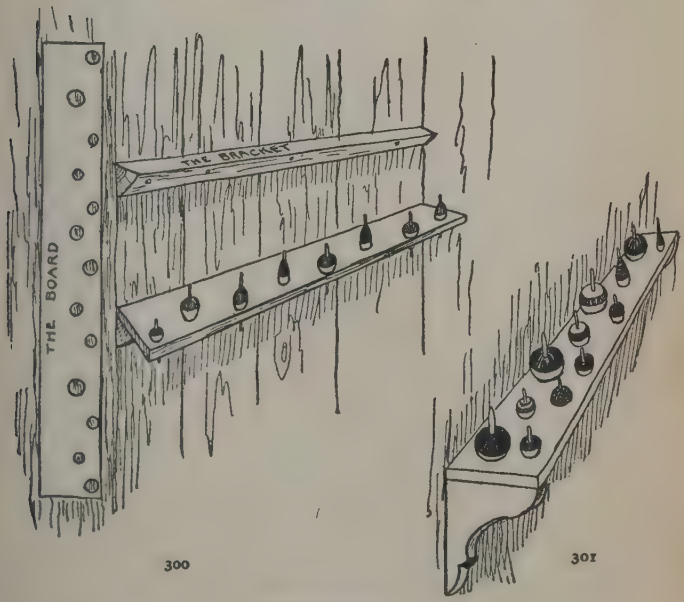
Fig. 299.—Out-door Rod Rack Locked and Safe

G, and fold the edges back, as at *H*, so as to cover the exposed wood on the sides of the notches.

Nail the quartered log bracket (Fig. 291) to the wall, then nail on the shelf, as in Fig. 293, and the shack rack is finished.

A cruder one is shown by Fig. 294, which consists simply of the log bracket with some nails, around the heads of which short pieces of wire are twisted, bent over, and formed into hooks at their ends.

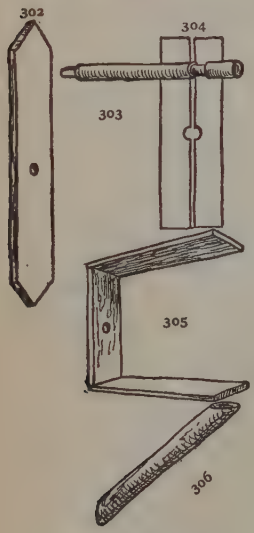
Fig. 296 shows an enlarged view of wire and nail.



Bobber Shelves

Fig. 297 shows a cabin rod rack made like a whip rack—the rounded surface economizes space. The greatest difficulty to be encountered in a cabin or cottage rod rack is that the ceilings are seldom high enough to admit of any rod longer than a bait-casting one to be suspended above

the floor, but, fortunately for us, most cabins and summer cottages are unplastered, and by simply sawing out a section of the floor of the room above, and covering the opening with a box of the required dimensions, a two-story cabin rack (Fig. 298) may be made without in the least marring the house. The top of the rack may easily be arranged to serve as a table, wash-stand, or bureau, and left in the form of a square box will be useful in the bedroom as a shelf upon which to set your looking-glass or any of the many articles you may have in your sleeping apartments or bunk-room. But if you hesitate at cutting a hole in the floor,



Parts of the Reel Box

An Out-door Shack Rack

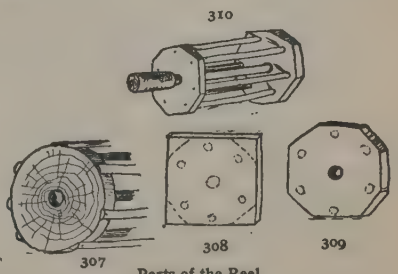
can be built against the outside of the cabin with a long door reaching to the top and fastened with a padlock, as in Fig. 299. Every one who has a permanent camp by lake or stream will have guests who know nothing of the art of fly casting, or the even more difficult bait casting, but all such people enjoy still fishing with live bait, sinker, and bob. For the convenience of such guests I have placed in the grill-room of my log camp a board shelf below the mantel, over the big fireplace. This is

A Bobber Shelf

ınd holes of different dimensions bored in the shelf (Figs. 300 and 301) form safe receptacles for all the bobs, corks, or floats used by my guests. Besides the great convenience of the bobber shelves, they are ornamental in the extreme, ınd the gaudy hues of the painted floats add a bit of needed color to the rich but sombre hues of the log sides and rafters. Another great convenience in a fisherman's cabin is a large

Drying Reel

All fishermen have small reels for this purpose, but they are too small for quick drying, while a big reel attached to the grill-room wall is always there and ready for use, and its generous dimensions give ample opportunity for a free circulation of air around the wet and clammy line, causing quick evaporation and insuring a dry line for next day's work, as well as preventing mildew and decay.

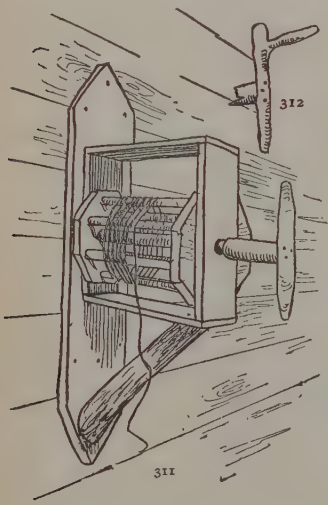


Parts of the Reel

It is a simple thing to make the reel. Fig. 302 shows the back board nailed to the cabin wall; Fig. 303, the spindle of the reel; Fig. 304, the two boards to form the front of the box; Fig. 305, the top and sides, and Fig. 306, the bottom brace.

The wheels of the reel can be made of two sections of a tree trunk, which are joined by slabs made of saplings which have been halved, peeled, and nailed to the wheels (Fig. 307).

Or the end of a board may be sawed off, making a square (Fig. 308), the corners sawed off as in Fig. 309, and sections of broomsticks or saplings of similar size nailed to the wheels in a circle, as shown by the dotted lines (Figs. 308 and 309) or by the nail heads (Fig. 310). The spindles can be made as in Fig. 303, and the whole enclosed in the box and fastened to the wall, as in Fig. 311.



Cabin Drying Reel

A balance handle may now be attached by nails or screws, or it can have a windlass handle, as in Fig. 312.

While it is needless risk to leave fine tackle all winter in an empty camp, it is unnecessary to tote home all one's belongings.

Minnow nets and other cheap articles may be left to take the chance of being stolen by winter marauders; but there are the red squirrels, wood-mice, and, worst of all, the pretty little flying squirrels, which will gnaw any fabric they

can find into fine shreds for nesting material, unless the fabric is spread out *without a wrinkle.* For years I have kept my minnow net secure by the simple device of placing a tin pan or wash-basin in its bottom and then hanging it free from other objects. A net with corks and sinkers escapes

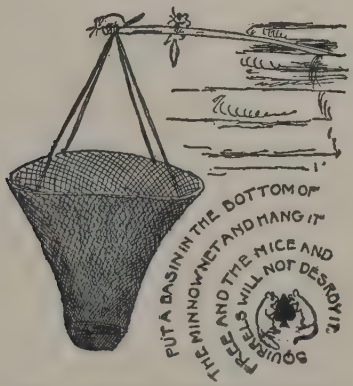


Fig. 313.—This Net Will Not Be Disturbed

the ravages of these animals by being carefully spread over my canoe. But every bundle or folded article left unprotected by box or case is reduced to lint by next season, and stuffed into my rubber boots or the stovepipe or some other good nesting hole.

CHAPTER XVIII

TOTEM-POLES, TOTEM-BOARDS, AND TOTEM-ANIMALS FOR S. D. B. FORTS, CAMPS, OR COUNTRY HOUSES

TOTEMS date back to savage times, whether they are carved in wood and set up in front of an Alaskan native's hut, or emblazoned in colors and stamped upon a letter-heading, or tattooed with carmine and India ink on the bosom of a Jack-tar.

When we go to the woods it is for the purpose of leading a primitive life, so it is right and proper to associate totems with our abodes in the forest, and every camp should have a distinct emblem of its own—something by which one may, at a glance, distinguish one camp from another. Thus, in speaking of permanent camps, log houses, or wilderness homes, in place of calling them Jones's, Smith's, and Brown's, we could say the Beaver or the Fishhawk, the Bear or the Woodchuck, according to the totem of the camp in question. If totem-poles were erected at all the public and private camps in the North woods, it would add much to the picturesqueness and interest of the country.

Fig. 314 is a totem-pole which may mean that the Fort with the totem of a flying squirrel has won a victory over the Fort of the spotted lynx and also of the striped auk, or it

may mean that the auk, lynx, and flying squirrel have united and formed a Fort.

Fig. 315 is the totem of the spotted turtle. *X Y Z W* show the top of the totem-pole. The victories, if the turtle wins any, may be placed below it, as animals are placed below the flying squirrel and the striped auk in Fig. 314.

Fig. 314
Plank Totem

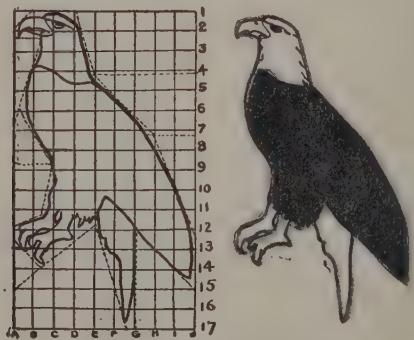
You may think that it is much easier to win the victories than it is to record them by making totem-poles, but there is no reason why any Fort of the Sons of Daniel Boone should not be able to build and construct their own totem-poles without much trouble. For instance, suppose your particular totem is the bald-headed eagle (Fig. 316). Of course I do not expect that every Son of Daniel Boone can draw off-hand a picture of an eagle, but I not only expect, but I also believe, that every one of them can draw *this eagle* by dividing a piece of paper up into the same number of squares as those shown in Fig. 317 and then making a copy.

Fig. 315
Turtle Totem

Totem-poles, however, are not made of paper, they are usually carved from logs of wood, but we will use plank or boards, and thus make the process of manufacturing more simple. Now suppose that you have a board eighteen inches wide; lay it down on the floor, and divide the eighteen inches into nine parts; lay your ruler along the top edge of the board, and with your pencil make a dot at the two-inch mark (*B*, Fig. 317), then at the four-inch mark (*C*), and so on every two

inches across the board, and mark these *A B C D E F G H I J*, as in Fig. 317.

Now measure down the sides of the board two inches, then four inches, and so on until you have seventeen points, each of them two inches apart. Do this on both edges of the board and then rule lines across from point to point, in

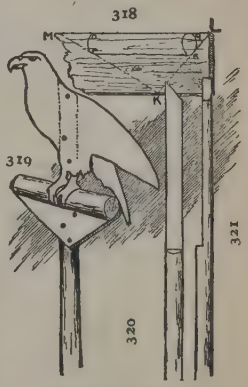


317 316

How the Eagle is Made

this way dividing the field up into squares to correspond with the letters in Fig. 317. Now place the page alongside of you on the floor. You will see that the eagle's head occupies four top blocks in the upper right-hand corner of the diagram, that the point of the beak commences about a quarter of a block below the line 2 and about a quarter of a block to the right of the line *A;* make a dot here with your pencil point. You will notice also that the top of the beak crosses the line *B* about one-third of the distance below line 1; make a dot at this point. Connect with a curved line

the first and second dots and you have the line of the top of the beak of the bird. In this way you can trace the complete outline of the eagle, the only difference between yours and the copy being that the eagle you have drawn is many times larger than the one on this page. After you have completed the outlines as they are in Fig. 317, take a hand-saw and saw the bird out roughly, as shown by the dotted lines. For instance, you commence on the line *A* where the line 15 strikes it, and then follow the dotted line across *B C D* to a point on *E*, one-quarter of a block above line 12; you then begin to saw at a third of the distance between the *F G* on the line 17, following the dotted line up to the point you have just left. This will cut out an irregular-shaped block shown between the feet and the tail of the bird. After you have cut out all the pieces carefully, take a good, sharp pocket-knife and carefully whittle down to the pencil lines of the bird. Now take some black and white and yellow paint, and paint the head, neck, and tail white; paint outlines and the body, wings, and leg feathers black; paint the beak, feet, and ankles yellow; paint the eye yellow, with a black centre, and the totem-bird is finished and ready to be nailed over the door of your Fort or placed on the top of a flagpole. To do this, take another piece of plank and cut out the triangle (*M L K*, Fig. 318). On this perch you may paint with black or brown paint the section of a stick shown



Eagle and Pole

by dotted lines in Fig. 318, and in a more finished state in Fig. 319. Next trim off the corners (*M O P* and *L Q R*), so that the ends will be curved to correspond with the perspective, with the piece of stick upon which the eagle is supposed to be perched. Flatten the end of your flagstaff in the manner shown by the front view (Fig. 320) and the side view (Fig. 321), and fasten the perch with screws to the flattened part of the staff; afterward fasten the eagle with screws upon a perch, as shown in Fig. 319.

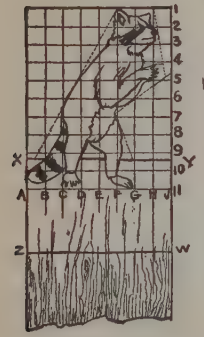


Fig. 322.—Pattern for 'Coon

The perch, you will notice, is not set on at right angles but is tipped up at one end. This is to accommodate the position of the eagle's feet and the perspective of the painted stick, and when the perch is fastened to the top of the pole and the eagle ready to be placed on the perch it will be found that there is a space between the eagle and the flattened end of the pole corresponding to the thickness of the board. This can be remedied by inserting a piece of the same board behind the eagle, or

Fig. 322A.—Gable Totem

if the totem-maker is a skilful hand with his tools he may allow for this difference in thickness when he is flattening the end of the pole.

If you choose the raccoon as your totem, you may cut it out in the same manner as you did the eagle, by enlarging Fig. 322 to the size of the end of the plank from which you propose to make your totem. *X Y* Z *W* is the stand which supports the raccoon. This may be nailed to the peak of your roof (Fig. 322 A), over the door of your Fort, on the front wall, to the top of a totem-pole or flagpole. If you should wish to start in with a regulation totem-pole, and the totem of your Fort is the log cabin, you can take a long plank, divide it up into squares, as in Fig. 323, and copy this figure as already directed. Cut it out in the same manner, and paint it red, blue, yellow, and black. None of these animals being true to nature, the colors may be as gaudy as you wish; the auk may have a yellow body with blue beak, wings, and feet; the Indian head may be a brilliant red; the bear may be painted either black, blue, or yellow, with a red-spotted breast. This will

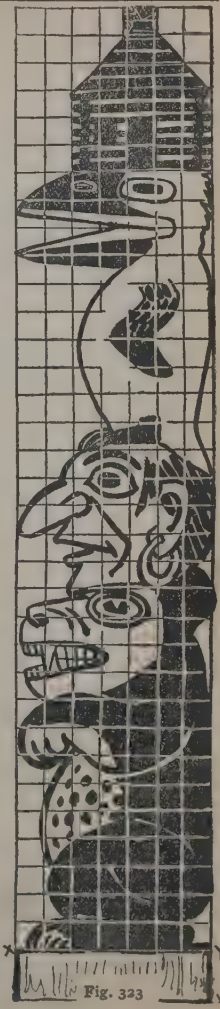


Fig. 323

make a gaudy and picturesque totem-pole which will excite the curiosity and admiration of all the boys in the neighborhood.

Away up north, in the wilderness south of Hudson Bay, I made the acquaintance of Jean Baptiste, and Jean was a very comical and good-natured fellow. I made a sketch of him (Fig. 324) to serve as a totem of some Fort of the Sons of Daniel Boone. The diagram is divided into squares, and may be enlarged to any extent you may desire. Fig. 325 is the totem of the mountain-lion—yellow body, blue tail, red stand. Of course, real mountain-lions do not have blue tails, but totem-animals, like the animals in fake nature books, are astonishing and wonderful creatures, and they may be any color or combination of colors which may please the artist's fancy. The mountain-lion may even have a red body and a blue tail without injuring the reputation of the painter or gaining for him the name of "nature faker."

Fig. 324

Totem-Bird

There is nothing about a log cabin or a totem which an expert axeman cannot make, and if you do not personally happen to be an adept with the axe, your guide or friend in the woods will do the axe work while you can make the plans, work with the saw, and do the less skilful work. It is much less difficult to carve out totem-poles than it is to build a totem-bird; consequently we will devote most of the space

to describing how to build a totem-bird for the roof of the house or to surmount the top of a totem-pole.

Suppose that you cut in the woods a log 10½ feet long by 1⅝ feet in diameter (remember that these dimensions are only units of measure and may represent inches, feet, or yards, but for convenience in describing this we will suppose the log to be 10½ feet long). Then at the distance of 5⅝ feet from the end marked *C* (Fig. 326) saw the log in two at the line *A B;* then take the piece represented by the letters *A B H G F*, and saw off from the *G* end of the log a diagonal piece, shown by the dotted line *F G*, *G* being a point on the end of the log ⅜ of a foot from the bottom, and *F* a point on the top of the log ½ of a foot from the end. Now mark another point at the bottom of the log at *H*, which is 1⅜ feet from the end, and cut off the part shown by *H G*. This will give you Fig. 328. On the bottom of the log (Fig. 326) measure from the *C* end 2 1/10 feet to a point marked *E;* then measure 7/10 of a foot on the end of the log to the mark *C*, and from *C* saw down to *D*, which is 2 2/10 feet from the *C* end of the log. After sawing down from *C* to *D*, saw in from *E* to *D;* this will cut out the block *C D E* and give you Fig. 327, which represents

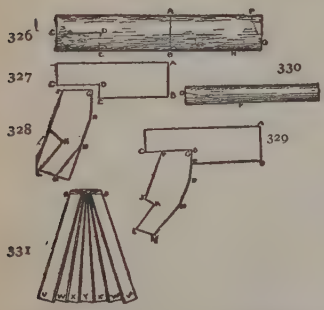
Fig. 325—A Mountain Lion

The Head of the Bird

Fig. 328 represents the body. Do not be alarmed because the head of the bird is larger than its body; this is often a peculiarity of the totem-birds. But to finish

The Body

and make it more like that of a bird, measure $1\frac{9}{10}$ feet from the bottom of the body (marked *L N*, Fig. 328) to a point *M* on the edge of the log, and saw off the piece *N M*. Now saw a line *L K* parallel with *N M*, and make it $1\frac{9}{10}$ feet from *L* to *K*. Mark *J* on the back of the log at $2\frac{8}{10}$ feet from the lower end and cut out the piece *J K L*. You will then have the body ready to fit on the head shown in Fig. 329. Fig. 330 is a smaller log of wood $6\frac{8}{10}$ feet long and a scant one foot in diameter. Two of these logs will be used for the legs of the totem-bird; to make them fit upon the body a piece marked by *O P* will have to be cut from the end of each log. The dimensions of the piece *O P* are not given here because they are of no particular importance. It is only necessary to cut the diagonal piece off so that you shall be able to spike the legs of the bird to its body.

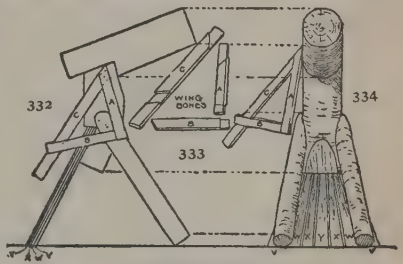


How to Cut the Log and Group Tail Feathers

The Tail

of this wonderful creature is made of splits, shakes, or clapboards, which are pieces of rough material rived from the log by the aid of a tool known to woodsmen as a froe. Of course, mill lumber may be used in place of the rived

material, but it is not as appropriate as the former. To fasten the tail on the bird arrange the parts as shown in Fig. 331; then saw off the top ends of the tail feathers, as shown by the line *R S* (Fig. 331), after which take the *V* and *V'* tail feathers and nail them in place at each side of the bird; next take *W* and *W'*, *X* and *X'*, and nail them in place; this will leave an opening in the centre which is covered by the tail feather *Y*. Figs. 332, 334, and 335 show the bird in its crude, uncarved state with the tail and legs attached. Fig. 332 is the side view of the bird; *A C B* (Fig. 334) are the wing bones, which are nailed together and hung from the bird's shoulders. Fig. 334 shows the front view of the bird and Fig. 335 the rear view. We have put the bird together roughly so that we may see that the parts will fit in their proper places, but before we fasten the wings permanently to the body we must cover them with feathers, as in the case of a bird's tail.



Parts of the Bird

The Feathers

are represented by shingles, shakes, or clapboards. In order that we may put the feathers on more securely it may be well to nail the brace across from the angle of the wing to the upright board, as shown in Fig. 336. The upright board in this figure is supposed to be 6 feet long; the two boards forming the triangle are each about 4 feet long. For the

principal wing feathers we need six boards, the first one being 3 feet long, the second $3\frac{1}{2}$ feet, the third $4\frac{1}{2}$ feet, the fourth $4\frac{1}{2}$ feet, the fifth 4 feet, and the sixth 4 feet. Nail the first one onto the apex of the triangle, as shown in Fig. 336. On top of this nail the second one, then the third, fourth, fifth, and sixth, as represented in the diagram. The second lot of short feathers are represented by boards with the square ends, which are nailed in place after the manner of clapboards on the side of a house, with the edges overlapping (Figs. 336 and 337).

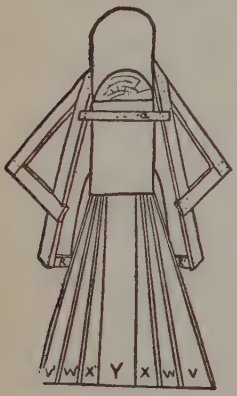
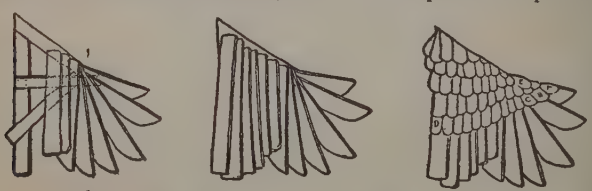


Fig. 335.—Rear View of Bird Frame

The Top of the Wing

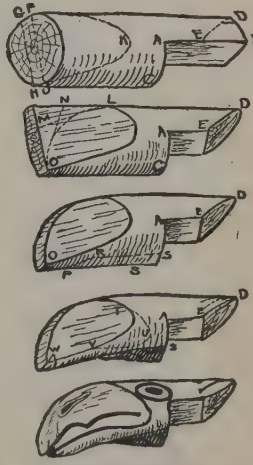
must be shingled, as shown in Fig. 338. If the edges of your large wing feathers are so thick as to make the surface too uneven for shingling, thin strips of wood can be tacked across them and the shingles nailed to these strips. First put on the shingles *A B C;* trim these with your jack-knife to the proper shape to fit the space occupied by



336 337 338

Showing How to Put the Wing Feathers On

them on Fig. 338; then tack on the other shingles down to *D* (Fig. 338); over *A B C* put the next row of shingles, and overlapping them at *C B A* cut a shingle to represent the one marked *E* (Fig. 338). The rest of the work is plain shingling until you reach the top, where two or more of the shingles should protrude to represent shoulder feathers and conceal the wooden joint at this point. After this is done the wings may be hung upon the bird and adjusted to the position which best suits the fancy of the builder. In Fig. 335 are shown



Evolution of the Head

Three Braces

(*Q R R'*) to hold the wings in place. The braces and their position are largely dependent upon the angle at which the wings are attached to the body, and it is only necessary for the builder to remember that in making the braces for the wings he needs to make them as secure as possible, and at the same time to place them in the position where they will be more or less out of sight.

To Model the Head

take the end of the log, which is now in the form shown in Fig. 339, and draw two lines across the centre of the front end of it to represent the width of the bird's beak, as shown by

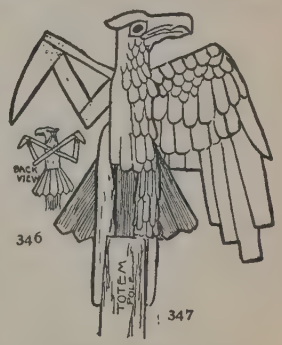
A Totem to Be Proud of

F J and *G H;* then shave off the side of the log from *K* down to *F J;* do the same upon the opposite side, so that the log will now be in the form of a blunt-edged wedge (Fig. 340). To get the curve of the bill, cut off the line *L M* (Fig. 340), and next the line *N O*. Then it is an easy matter to trim off the uneven angle, and we will have the head in the form shown in Fig. 341. In case the distance from the top to the bottom of the bird is considered too great, it may be modified by cutting off a piece represented by *P R S S* (Fig. 341). The side of the bill may then be extended backward and flattened by trimming down the piece *T U V* to correspond with the rest of the beak.

The Crest Feathers

at the back of the head are made by sawing off a triangular piece *E D B* (Fig. 339), which leaves the back end of the

log in the form shown by Figs. 340, 341, 342, and 343. The crest feathers may be indicated by cutting grooves or simply painting broad lines, as shown in Fig. 343; and in the same manner the eyes, the opening of the beak, and the nostrils may be painted or carved, or both. When the head is finished it may be attached to the top of the body by a hard-wood peg driven down through an auger hole bored for that purpose, the wings spiked in place, and the bird made to assume any pose you choose. Swing the body forward or backward on the legs and then nail it securely in the position you desire. Fig. 346 shows the manner in which the wing bones are nailed to the back of the bird; and Fig. 347 shows the bird half covered with feathers and showing the framework. Fig. 348 shows



Spread-Eagle Totem

A Killaloo Totem-Bird

made to be placed upon the ridge-pole of a log house. In Fig. 348 the killaloo has the feathers carved upon its body and legs, but its back is shingled.

This bird should be painted in very brilliant savage colors: red, black, and yellow (Fig. 345). In making the totem the animals that you represent may be very crudely made, but there are certain characteristics which must be remembered when you are attempting to represent certain animals; for instance, if you make the beaver, you can make his

Fig. 348.—A Killaloo Totem-Bird Roosting On the Roof

head big or little, his body long or short; but his paddle-like tail must not be forgotten, neither must the chisel-like teeth (Fig. 344), which are characteristic of the family to which the beaver belongs.

CHAPTER XIX

HOW TO MAKE A "GYM" IN AN ATTIC, A BOY'S DEN, CLUB-ROOM, OR FORT

AN old-fashioned attic is an ideal place to fit up a gymnasium in one's own house, and a "gym," as the lads are wont to call it, is just the place for boys to "have fun" when the weather compels them to stay indoors.

The Parallel Bars

give an opportunity for a free vent for the restless energy which all wholesome boys possess and which they must work off in some way; but no self-respecting American Boy Pioneer or Son of Daniel Boone will stoop to purchase horizontal bars at a shop when he has the time and knows how to build a pair himself.

The dimensions of the parallel bars depend to a great extent upon the space one has at one's disposal, and the best way for a boy to judge the proper distance to set the bars apart is by experimenting with a couple of chairs set back to back, and adjusting the space between them to meet the requirements of the size and reach of the young gymnast.

Remember that the principal act is to support your body above the bars with your two arms, while your legs dangle below the bars, but not touching the floor.

This cannot be done with bars too far apart. The bars must be close enough together to make it a simple task to straighten your arms and lift your body and feet.

After you have, by experiment, found the right space between the bars, make a note of it, and then measure your

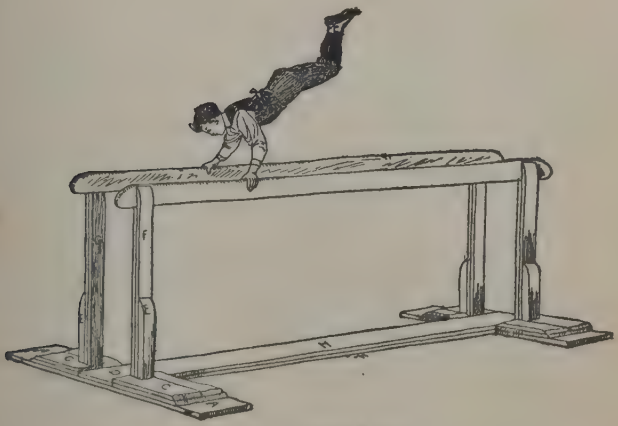


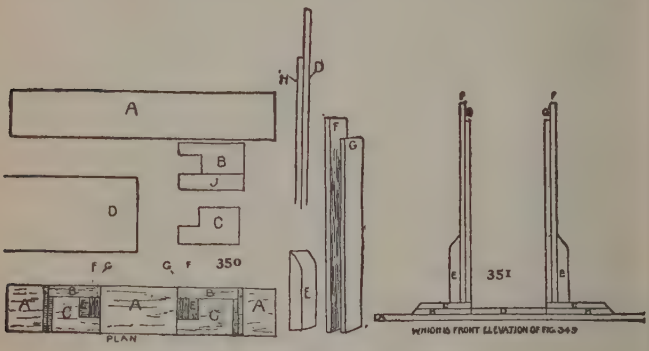
Fig. 349.—In Full Swing

own length with arms out-stretched. Twice this distance makes a good length of bars between the upright supports.

By referring to Fig. 349 you will see that unless the ceiling is about as high above the bars as your length, including your arms, there will be constant danger of striking your heels overhead. By the same illustration you can see that the bars themselves must be high enough above the floor to allow a full swing of the body and legs below the bars with no danger of striking the feet.

For base-boards to the uprights *F* and *G* you will need two *A* boards (Figs. 350 and 351).

Fig. 351 shows about the proportional length of the *A* boards. To be on the safe side, make them a little longer



Parts of Framework; Also Plan and Elevation

than you think necessary. Use one-inch or one-and-one-half-inch plank; mark the distance required between the bars on the middle of the *A* boards.

Make four *F* boards the length necessary for the height of the bars, and four *G* boards shorter by the width of the horizontal bars than the *F* boards (Figs. 349, 350, and 351). *F* and *G* should be each one and one-half inches thick by six inches wide.

Make four *E* blocks, each two and one-half feet long, four inches thick, by six inches wide. If you have no material of this thickness, make the *E* blocks by fastening two pieces of two-inch plank securely together. Use screws for this purpose, screwing them in from both sides.

With some good, long wire nails or screws fasten the *F* boards to the *E* blocks, and then join the *F* and *G* boards together by screws from *G* into *F* and from *F* into *G*. Put in screws enough to join *F*, *G*, and *E* so securely that there will be no danger of them pulling apart, but do not put in enough screws to weaken the parts and render them liable to split.

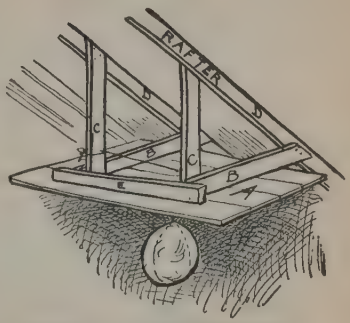


Fig. 352.—An Attic Punching-Bag

If this work has been done properly, you now have four uprights strong enough to support the heaviest man in your families, and that is as it should be, for there is no pleasure in using apparatus which is liable to go to pieces.

Next nail your *D* board (Figs. 349 and 351) to the centres of the two *A* boards, turn them over, and nail the *H* boards (Figs. 349 and 351) to the *D* board, fitting snugly between the two *A* boards.

Turn the boards over again and toe-nail your six upright supports (the *E F G*'s) midway on the *A* boards and fitting snugly against the *D* board.

To brace the uprights you may run diagonal pieces from the top of *E* at each upright to the end of *A*, or you may make of one-half-inch plank four *C* boards, four *B* boards, and a *J* board to fit on each, as it does in the diagram *B J* (Fig. 350).

The plan (Fig. 350) shows the boards all in place with

the exception of the *J* boards, which belong with the *C* boards; these are left out in the plan to show a part of the *B* boards under the *C* boards.

Nail or screw all these pieces neatly in place, and you are ready to fasten your two horizontal bars of straight-grained

Fig. 353.—Building a Twisting Rod or Grip Bar

pine to the *F* boards (Figs. 349, 350, and 351) with good screws. With what tools you have for the purpose, round the upper edges to the horizontal bars and sand-paper them until they are perfectly smooth; then try your machine and you will find that it will require considerable practice before

you are able to do any graceful swings. But, with perseverance, you will be able to do the most surprising acts with a freedom and grace which will win you applause and health.

It is safe to say that there is scarcely a machine in a well-equipped gymnasium which an ordinary American boy could not build.

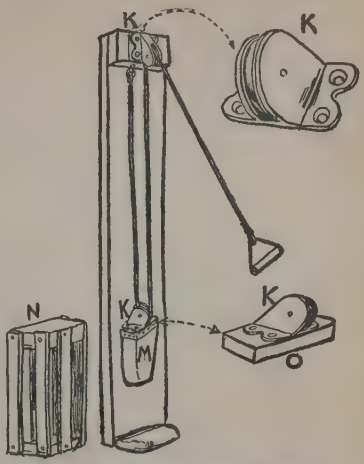


Fig. 354.—Details of Chest Weights

In Fig. 352, *A* shows a simply made punching-bag platform *D D* are the rafters of the attic ceiling; *B B* and *C C* are braces, screwed tightly together and to the rafters above; *E* is a horizontal brace; and *B B E* form the frame to which the platform *A* is nailed or screwed.

A hole in the centre of the platform allows the thong, supporting the bag, to run through; the end of the thong is then made fast to *C*. Hitting the punching-bag is fast and furious exercise and good training for any one.

Fig. 353 gives all the simple details of a

Grip Bar

The bar, as may be seen (*A*, Fig. 353), has a thong or stout piece of cord running through a hole in its centre; a good-sized knot in the end of the cord prevents it from slipping

through the bar when the weight is attached. Make the weight of any heavy object to which you can fasten a cast-

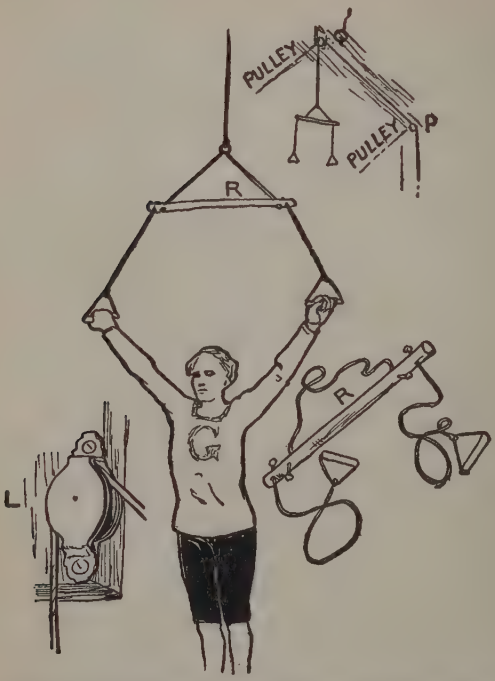


Fig. 355.—Details of Weights and Pulley for Biceps and Shoulder Muscles

iron pulley such as may be purchased at any hardware shop. Screw another pulley to the top cross-bar shown in the diagram. Let the thong or cord run up through the pulley in the top cross-bar, then down through the pulley

on the weight, then straight up to the top bar again, where the end is made fast to a hook or screw-eye, as shown in Fig. 353.

To work the machine, grasp the bar with both hands and lift the weight by winding up the cord with a twist of your wrists; if the weight is at all heavy it will test the power of your grip.

Fig. 356.—With This Bar You May "Chin" Yourself

Fig. 354 shows a simple arrangement of pulleys and weight. *K* is a pulley purchased at the hardware shop and *M* and *N* are home-made weights. *M* is a canvas bag filled with scrap-iron; *O* is a wooden block to which the bag is tacked and on top of which the pulley *K* is screwed. *N* is a slat-box weight made to be loaded by filling it with stones, iron, or lead.

Fig. 355 shows an overhead pulley for arm exercise. *R* shows the details of the spreader and handles, *Q* and *P* the locations on the rafters of the pulleys, and *L* the enlarged view of a pulley.

The weight for this can be made like *M* or *N*, and the cord attached directly to the weight by a screw-eye or some similar device as a fastener.

Fig. 356 is a chinning bar attached to overhead rafters. The construction of this is so simple that the diagram supplies all the description necessary.

Now that the reader is supplied with a "gym," all equipped, we will expect him to be a very strong fellow by next spring.

CHAPTER XX

WINTER SPORTS FOR SONS OF DANIEL BOONE—RUNNING THE INDIAN SCOUTS, CATCHING THE RACCOON, RUNNING THE GANTLET, "GANDER-PULLING" AND "THE GOOSE HANGS HIGH"

ALL of the sports of our buckskin ancestors were of a nature to perfect these hardy men in skill with their weapons or to add to their agility, quickness of movement, and physical prowess. As has been previously remarked, the old pioneers were essentially men of physical strength and quickness of perception and action. The business of fighting Indians was one which constantly brought into action and use their powers as athletes. The price of being slow, of getting confused, in those days, or of hesitating, was the loss of life and one's scalp. Every Son of Daniel Boone should imitate their forebears, not in fighting the poor savages, but in acquiring as nearly as possible the same sterling qualities of mind and body which made such men as Boone great. For this purpose there is nothing better than the following game of

Running the Indian Scouts

To play this game or to run this sort of race, it is necessary for some of the boys to act as Indian scouts. Let Daniel Boone select the scouts and arrange them as the

dots on the diagram (Fig. 357, *A*, *B*, *C*, *D*, etc.), are placed. When the scouts are at their posts and the two racers selected, line the latter up on the taw mark at *K*. At the word "Go" the racers skate or run, as the case may be, in and out among the Indians, to the line *A B*, then back again,

357

358

Running the Indian Scouts on Ice

and finish at *K*. If there is but one man in the race running against time, he starts in at *K* (Johnny Appleseed holding the time watch) and follows the direction of the arrow round the left side of *G*, into the centre and around the outside of *F*, out again to the left side of *D*, then turns in to the right side of *C*, only to again turn out to the left side of *A*. From there he circles around to the right side of *B*, in again to

the left side of *C*, then out to the right side of *E*, in to the left side of *F*, out to the right side of *H*, and finishes on the *K* line, to the left side of *K*, as indicated by the arrow. But the fun occurs when two white men start to run the scouts. In this case they line up on each side of *K*. If there are but two men, one turns to the right, circling out to the right side of *H*, while the other turns to the left, circling out to the

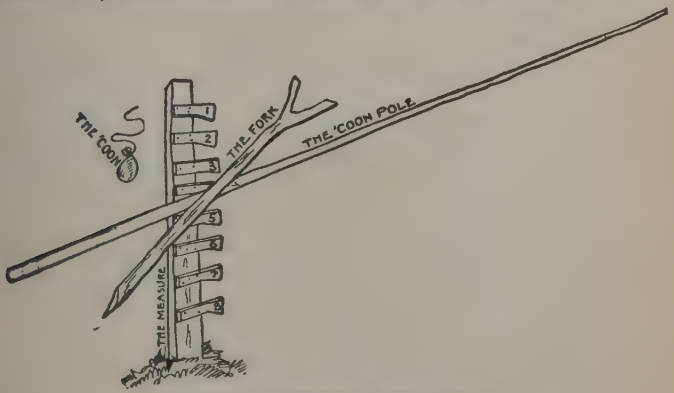


Fig. 359.—Parts of the 'Coon Machine

left side of *G*. In this way they continue dodging each other and the Indians to *A B* and back again, finishing at *K*, as shown by the dotted line in Fig. 357. Fig. 358 shows a picture of the scouts in position and one racer in the foreground. All the side scouts are not shown in Fig. 358, as a perspective view showing them all would make the picture unnecessarily large.

The racers are supposed to be escaping prisoners. It is a foul for one of the prisoners to come in contact with one of the Indians, and the prisoner who does so is considered

as captured, but it is not foul if they accidentally bump into each other. There is danger of collision at every point

Fig. 360.—Jumping for the Raccoon

of the race, and this danger is a part of the game, as it teaches the racer to dodge quickly when meeting an unexpected obstacle in his path.

But when two escaping prisoners are racing for a prize or record, it is a foul for one or the other to purposely inter-

fere with his competitor. On the ice this game is not only very exhilarating sport for the skaters, but a very pretty one to watch, and each member of the Fort can take his turn as a scout and as an escaping prisoner, Johnny Appleseed keeping a record of the time they make, and Daniel Boone awarding a nick to the winner or to the one who makes the best time among all the boys. Ten nicks make a notch, and the boy who wins ten of them in any of the field sports will be entitled to wear the insignia of the notch on the sleeve or cape of his wammus.

The illustration (Fig. 360) shows a Son of Daniel Boone leaping for the 'coon. This game can also be played upon the ice by boys with skates; but since many of my readers are located as far south as Texas, Florida, and Mexico, I have made this a picture of the boys on shore.

The Raccoon

is the name given to a small bag of sawdust which is suspended from a rod, known as "the 'coon pole," which rests in the notch of an upright stick, and is held in position by some cross-pieces nailed upon an upright plank, or post, as shown in both Figs. 359 and 360. Any sort of a light rod, from a piece of bamboo to a small lodge-pole pine, may be used for a 'coon pole, and any sort of a forked stick for the upright support. The cross-pieces upon the plank, or post, are numbered from the top to the bottom, 1, 2, 3, 4, etc.

As you may see by referring to Fig. 359, every time the butt end of the 'coon pole is lowered a notch, the other end, to which the 'coon is attached, is elevated. These numbered cross-sticks upon the upright post can be ar-

ranged to suit the players, and the one making the highest successful leap is awarded a nick.

It is necessary for a successful competitor to bear away the 'coon in his hand when he makes the leap. This is easily done if he jumps high enough for the purpose, because the

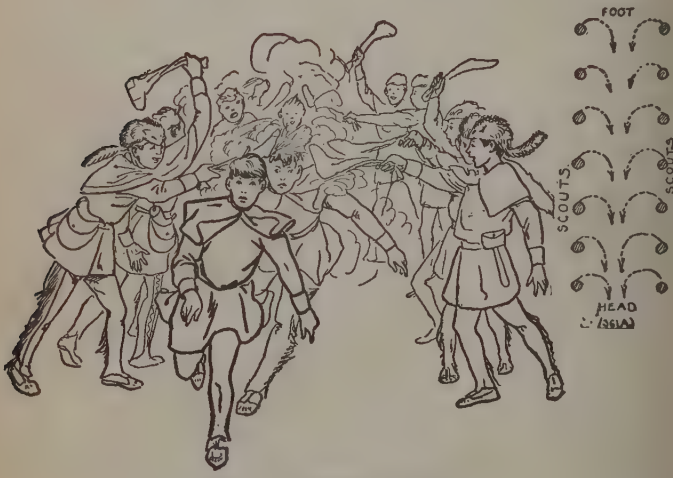


Fig. 361.—Running the Gantlet

'coon is only attached to the 'coon pole by an easily broken thread. A taw line is placed upon the ground at about twenty yards from the 'coon pole, and the jumper toes the taw line and only starts to run when the word is given. To be successful he must not only bear away the 'coon, but in alighting must come down on his feet without touching the ground with his hands. Appleseed Johnny stands at the

'coon pole as judge of the finish, and his decision cannot be questioned. Audubon keeps a record of all the leaps made, and the time in which all the winning races were won, as well as all the other doings of the Fort. Daniel Boone or one of his lieutenants, Simon Kenton, Kit Carson, or Davy Crockett, act as starters.

After you have tested your skill in these two games you may all run the gantlet, and I promise you that it will be as noisy, hilarious, and boisterous as any sport upon the calendar.

It frequently was the custom of the old red-skinned warriors, when they had a prisoner, to arm themselves with tomahawks and war-clubs and then form in two lines as if they intended to dance a reel. When everything was ready the prisoner was started down between the lines, and as the poor wretch passed each warrior endeavored to strike him with his tomahawk or war-club. It would seem that it must have been impossible for any one to run this gantlet and live; but Simon Kenton and many others among the pioneers succeeded in doing so and some in making an escape. We, however, do not intend to kill, maim, or even hurt the ones who are running the gantlet; we want only to mark them; so in place of deadly weapons, the two lines of the Sons of Daniel Boone can arm themselves with stockings in each of which a handful of flour has been placed. When you are all ready, form two lines facing each other. Then Daniel Boone calls out, "Attention! Are you ready? Go!" At the word "Go" the two men facing each other at the foot of the line start pell-mell, dodging to escape the stockings (Fig. 361), to positions facing each other at the

head of the line, where they halt. Just as soon as they have got in line they both shout out "Go," and the next two men at the foot of the line follow, in their turn running the gantlet, until they reach the head of the line. This is continued until every man has run the gantlet (Fig. 361 A shows how the men are arranged and how they run); then

Fig. 362.—A Gander-Pulling Contest

all are lined up for inspection, and the scout who is found to have the least flour upon his person is awarded a nick. To make this decision, Daniel Boone goes down the line and examines all the men; then he asks the three or four men who have the smallest amount of stocking marks upon them to take three steps to the front, and Appleseed Johnny comes up and decides which one of the three is the winner.

Whenever any one boy is announced a winner, do not fail to immediately give him three cheers. Never dispute

the decisions of your judges and umpires. Remember, you are all in this for the fun of it, and if you should be so unfortunate as to not have competent officers it can all be remedied at the next election. Every member of each Fort must stand back to back and support each other in every way possible, just as fellow-freemasons do among the men. The uniform or button of the Boy Pioneers or the Sons of Daniel Boone must bring the wearer a cordial welcome from all his brother scouts.

"Gander-Pulling" and "The Goose Hangs High"

When the stern Indian-fighters of the "Dark and Bloody Ground" of Kentucky and the other old frontiersmen sought relaxation in athletic sports, their games were naturally somewhat rough, but, considering the lives they were forced to lead, we cannot justly accuse them of intentional cruelty when they yanked the soft-soaped neck of a live gander in boisterous competition to see which of them was skilful enough to pull the poor goose from the perch.

But you boys of to-day can have the same fun without the slightest cruelty to any living creature, and at the same time preserve the historic and truly American sports. Of course it is a good idea to have a live goose for a prize, and the presentation of a living gander to the champion will give rise to lots of fun and do no harm to the gander. But we must also have a dummy goose as a substitute for the live one. Figs. 362 and 363 show patterns and details of a goose for this purpose.

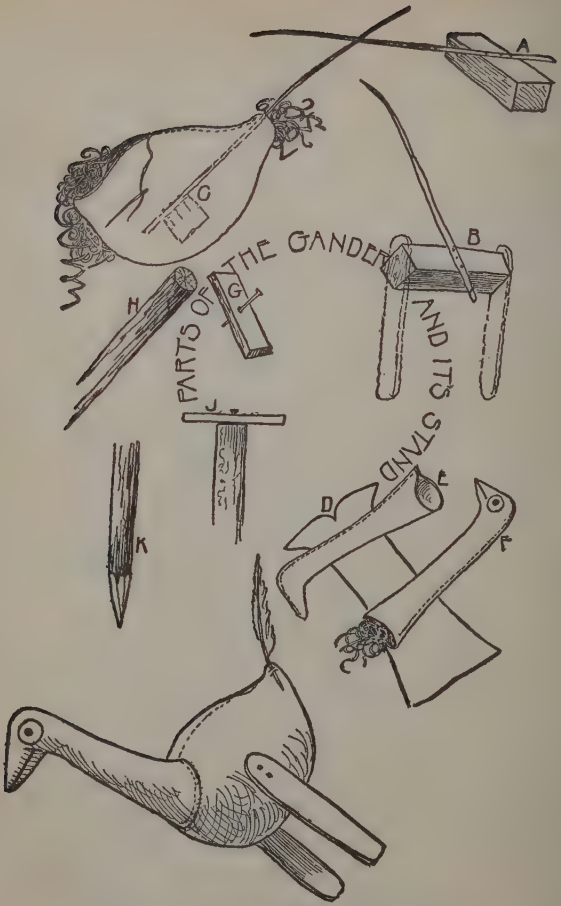


Fig 363.—The Gander and Details of His Make-Up

How to Make the Goose

To give the bird a life-like appearance, make a neck-bone of a piece of rattan, as shown by *A B C* (Fig. 363); fasten one end of this to the middle of a brick-shaped block of wood with some tacks, small brads, or staple-tacks, as in the diagrams. Make the body of a bag of denim or some other strong material. Cut the pattern after that shown by *C* (Fig. 363), in two pieces, and stitch it down the back with strong waxed thread far enough to hold its shape, while the rattan neck and wooden-block hip-bone (*A B C*, Fig. 363) are inserted and held in place with the excelsior stuffing and the shoulders are stitched together. Before sewing the whole body together stuff it well with excelsior.

The material for the neck must be as strong as that used for the body, and of a substance that may be made very slippery by smearing it with a copious supply of vaseline or any other similar stuff which will not become too hard when exposed to the cold.

Some sort of pliable leather is best adapted for the goose's neck. From this cut a pattern of the shape shown by *D* (Fig. 363). Fold the material in the centre as at *E* (Fig. 363), stitch it with shoemaker's waxed-ends, as in the diagram, turn it inside out as you would a stocking, so that the seam will be on the inside, and you have the neck of the goose completed.

But to make it more natural as well as more comical the eyes and the beak should be painted, as they are in Figs.

362 and 363. Fill the neck with excelsior loosely enough to allow the insertion of the neck-bone, then slip it over the bone and double-stitch the lower edge to the shoulders with strong, waxed linen thread. It is most important that the goose be made tough and strong. The leather cover of a foot-ball makes an excellent body for the goose.

His Wooden Legs

For the legs, cut two pieces of pine wood of the form shown by the dotted lines at *B* (Fig. 363) and full lines in Fig. 362, and nail them (with two small nails to each leg) to the hip-bone (*C*, Fig. 363), as shown by the dotted lines at *B* (Fig. 363). The Daniel Boone gander will then be ready for the perch *G* upon the gander post *J* (Fig. 363), where he should stand, as shown in Fig. 362.

The Gander Post

For the gander post use any sort of timber of about the thickness of a fence-post and long enough so that when the pointed end (*K*) is driven into the bottom of the pond the other end will protrude above the ice just high enough to place the gander within reach of the uplifted arm of the player (Fig. 362). Bore a small hole in the top of the post so that a round spike may be driven in without splitting the wood. *H* shows the top, *K* shows the bottom, and *G* the gander-post spike and perch fastened to the post.

You can see by Fig. 362 that the perch itself is simply a block of wood with a hole through its centre so that it may revolve freely on the spike as upon a pivot.

To erect the gander post, cut a hole through the ice

just large enough to admit forcing the post through it, then drive the pointed end of the post into the bottom far enough to make the post stand firmly and erect (Fig. 362).

Fig. 364.—Rah! Rah! Rah! Victory!

Now take the goose and fasten its legs to the revolving perch in such a manner that it will require a good, smart tug to tear it loose. After the neck is plentifully smeared with vaseline you are ready for the game.

"Gander-Pulling"

consists in pulling the bird loose from its stand by grasping the slippery goose-neck while skating at full speed. If the bird is properly made and adjusted there will be lots of excitement, no end of fun, and many laughable failures before the winner succeeds in triumphantly snatching the slippery-necked bird from its perch, as in Fig. 364. Of course you may vary the contest by having the competitors start singly for record time; and it will therefore be necessary to have a hammer, tacks, and a plentiful supply of extra legs to keep the goose in working order. The gander post may be erected on land and the players ride horseback as did the old pioneers.

Fig. 365

The next game is called "the goose hangs high," because to make a goal the player must hang the goose in the crotch of the gander stick. This game is also played with a canvas or leather goose, and by players on skates or horseback.

"The Goose Hangs High"

Erect two gander poles, one at each end of the field. The posts must have two forks, either made by natural branches on the stick or suitable branches cut from other wood and nailed fast to the poles, as shown by *A B C* (Fig. 365).

You will notice that in the diagrams the angles of the crotches are very sharp or acute. In case you are in a city or town where you are limited to the use of milled lumber, you may purchase screw-hooks at the hardware shop as substitutes for the natural crotches.

Fig. 366.—Field Plan

The goose for this game needs no skeleton, neck-bone, or legs; it is simply a bag in the form of a ham-cover with the neck and head, the only requisite being a recognizable likeness to a goose and sufficient strength to stand the rough usage for which it was made. Midway between the gander posts mark the throw-ring on the ice or ground; next make a circle six feet in diameter around each gander pole to mark the safety limit shown in the plans and pictures (Figs. 366 and 367). To start the game let the two teams, with the men placed alternately, gather at the throw-ring around the gander-man.

The gander-man stands in the centre of the circle with

the goose in hand, grasped by the neck. The gander-man cries:

"One for the money!
Two for the show,
Three to make ready,
And FOUR to GO!"

With the last word he swings around and tosses the goose in the air to be received into the arms of some lucky player, who immediately dashes away with it for the goal. Just as the goose mounts the air the goal judges speed for their positions at their respective gander poles, and the rest of the game is like cross-tag, with this difference, that when a player is liable to lose the goose he tosses it to one of his own side if he can, and the man who catches the bird is IT until he gives it up or reaches the goal and swings it safely into the crotch. Each goal counts one goose, and five geese make a gander or game.

Rules of the Game

The gander-man is field umpire, and the other judges keep order at the goals and decide disputes arising at their posts. The instant a player's two feet are inside the safety circle he must not be molested unless he fails to hang the goose or allows it to slip from his hands, then any one of the opposing team may seize the bird and dash away with it or toss it to one of his own side.

There must be no scrimmage over the possession of the goose, for as soon as an opponent gets hold of the bird in your hands you must let go your hold. One must not trip

an opponent nor interfere by body, arm, or leg contact without forfeiting one "honk"; three honks count one goose (or goal) for the opposite side.

After the games are over, gather around your camp-fire, roast some potatoes and apples in the ashes, cook some simple food over the hot coals, and pass around refreshments; then, as you break up, give three cheers for your officers, then the club yell, shake hands all around, and start home.

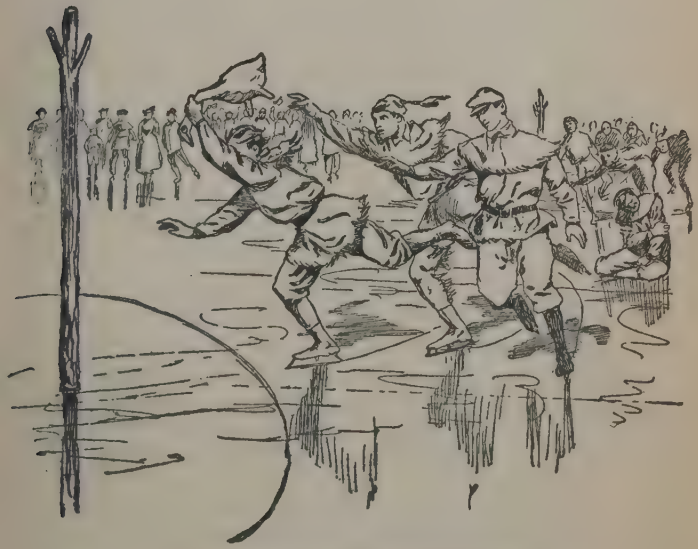


Fig. 367.—The Grand Rush for Home Stake

CHAPTER XXI

KIT CARSON'S DAY CELEBRATION

Siege of Boonesborough—Sons of Daniel Boone Defend Snow Fort Against Indians—How to Build Snow Fort —The Medicine-Stick: Rules of Game—The Buffalo Hunt and How to Make Animal Tracks

IT was more likely Santa Claus than the stork who left the little baby, Kit Carson, in Madison County, Kentucky, for it occurred on December 24, the day before Christmas. Kit was a grandson of Daniel Boone and a man in many respects very much resembling his grandsire. A quiet, resourceful, brave scout, just the sort to make his granddaddy proud of him, so he is doubly endeared to us and we must give him a rousing day.

Kit Carson is acting captain to-day, for this is his celebration and he calls the members of the Fort together, and if there are not enough boys in the Fort to make two sides, the assembly decides upon a list of names of boys whom they are to invite to attack their snow fort. These outsiders are supposed to be hostile Indians, and they establish a camp somewhere near the snow fort, erect a medicine-stick, and have a war dance around it. Johnny Appleseed, being a man of peace, is always welcome in camps of friends or foes. He visits the camp of the Indians and discovers them having a war dance. When they bid him good-by, which

they do as soon as everything is ready, he hastens to the Fort and reports to the commander that the redskins have dug up the hatchet and are on the war-path. Then the Fort sends out scouts and prepares for the attack.

Hark to the War-Whoop

The Indians attack in their own crafty way. Their war-cry is:

Woo-woo hay-ay hay-ay!
You-we-do! You-we-do!

This is a real war-whoop of the Northwest Indians. But the Indians will not give their war-cry until they are discovered by Boone and Davy Crockett.

The Boone boys' answering yell is:

Wow! wow! wow!
Row! row! row!
Gosh—all—hemlocks!
Buckskin and leather socks!
Waugh! waugh! waugh!
Rah! rah! rah!
Cut a notch,
Cut a notch,
{ Give three cheers
{ For we're the Boy Pioneers.

or

{ Cut—a notch—soon!
{ For we are the Sons of Daniel Boone!

This slogan of the Boy Pioneers or Sons of Daniel Boone is composed almost entirely of old Western expressions, and consequently is unique in its line.

While we are on the topic of yells, "Wah! Wah! Wah!" was and is still used alike by backwoodsmen and Indians to express admiration and applause; and "Whoo-ah!" or "Coo-wah!" is the Indian boys' call, and all the white boys on the border formerly used the same call. When I was a lad in Kentucky the boys still signalled to each other with the Indian call, often adding the name of the boy they wanted, as, "Whoo-ah, Frank Woodall! Whoo-ah!"

Let the Indians use "Coo-wah!" for a call and the Boone boys adopt "Whoo-ah!" while both may cry "Wah! Wah! Wah!" whenever they are pleased.

The Battle Begins

The Boone flag has been described in a previous chapter.

The Indians can use for their medicine-stick a rod with a feather duster fastened to one end, also a bunch of streaming ribbons and a lot of turkey feathers fastened with strips of red cloth, as in Fig. 368.

When the Indians are discovered creeping up on the fort, Daniel Boone cries, "Every man to his post!" Then

Fig. 368.—Bearer of the Medicine Stick

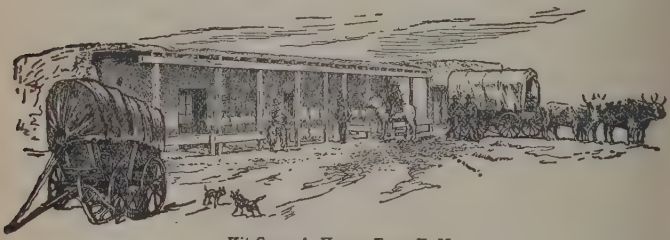
Fig. 369.—The Standard Bearer

Davy Crockett mounts the breastworks and shouts, "Be sure you're right, then go ahead." To this the Indians reply with their war-whoop, "Woo-woo! hay-ay!" and the battle is on.

Don't Be a Simon Girty

No boy who throws "soakers"—slush or icy balls—is allowed in the game. That is a trick worthy of Simon Girty, the cruel white renegade who waged war on his own race and lived with the Indians who were far better than he. Plain, every-day snowballs furnish excitement enough and injure no one.

The bloody practice of scalping their foes, formerly customary with both whites and Indians, now belongs to



Kit Carson's House, Taos, N. M.

a past age, but it will remain in folklore for hundreds of years, and so we will be the first to place the custom where it now properly belongs, and in place of the horrid trophies of the wild border people, we will try to capture the caps and hats of the boys, each one captured counting a score point in the game.

Scalp-Taking and Scoring

Thus, when time is called, if the fort has seven caps and the red men five, the fort has won. But if the scouts at any

time succeed in capturing the medicine-stick and planting it in their fort the battle is theirs, even if they have not a single cap for a score. On the other hand, if the Indians capture the Boone flag and plant it in their camp, the game is theirs.

Boys who lose their caps are out of the game, but they

Fighting In the Open

have the privilege of joining the spectators, shouting their war-cries, and encouraging their own side as much as they wish—that is, in place of being dead men they are simply non-combatants.

If the Boone boys have no banner they may paint one on a piece of white cloth, like Fig. 369, or they may use a colored handkerchief tied to a stick. All intercourse between the two opposing forces must be conducted under a white handkerchief (flag of truce), otherwise the visiting party may be captured by their foes.

Building a Fort

To build a snow fort, let every Boone boy start by rolling a snowball until it grows as big and heavy as he can manage, and then put it in position.

The Boone boys may have occasion to make a charge out of their fort and fight in the open, as in the picture on

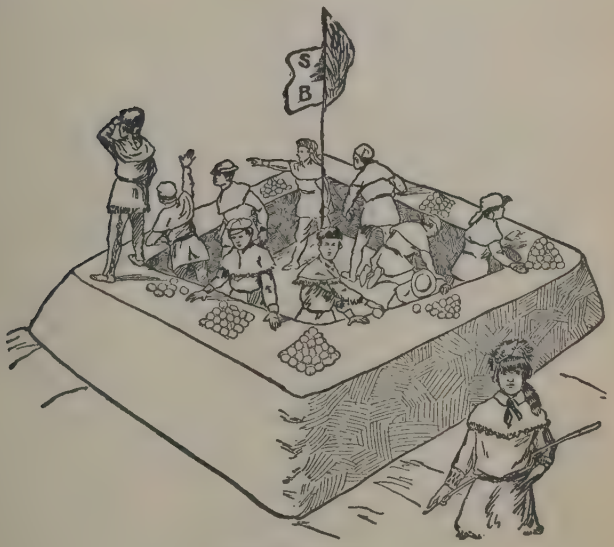
Building the Snow Fort

page 273, but they then run the risk of having the redskins occupy the fort and thus turn the tables on them by making them the besiegers of their own stronghold.

The Indians should be allowed more men than the defenders of the fort, say fifteen Indians to ten Sons of Daniel Boone. This will make about an even game. It is not considered fair for the foe to injure the fort itself any more than the accidental damage done by their feet when they try to climb over the breastworks. No blows with hands, feet, or elbows are allowed.

Rules of War

Remember, your weapons are simply hastily made, soft snowballs. No one must use his hand to hold on to his hat



Waiting for the Foe

or cap to prevent its capture by the enemy, but he must depend upon skilful dodging to escape losing his scalp.

In case of dispute Johnny Appleseed must shout "Stop!" and every one but the umpire must stand just where he is; the referee then steps forward and makes his decision. When Appleseed shouts "Go it!" the snowball battle begins again.

Play Fair

The Boy Pioneers always play fair and uphold their chosen umpire's decisions, even if they feel sure he is mistaken, for the boys are in for fun and a jolly good time. Of course they want to win, but they would rather win for

Fig. 370.—Big Foot's Foot

their Society the reputation of being "on the level" in all their games than win a game on an error or a disputed point. Next comes

The Game of Big Foot

The shaded part on the diagram (Fig. 370) is a pattern from the track of a real moccasin. Cut two pieces of packing-case board in the shape of the pattern, nail a broomstick to a block, and from the bottom of moccasin boards nail the block to boards, as shown in diagrams. To play the game, "It" takes the moccasin boards and makes tracks in the snow in such a way as to deceive, if possible, Adam Poe and his followers; the rest of the game is the same as a paper-chase, only Big Foot must have a reasonably good start to give time to make the trail.

This game is made from incidents and adventures which happened in the strenuous time in American history, when life was different from what it is now. To-day, of course, no one would think of sallying forth with gun and bowie-knife in search of the enemy here at home. Least of all would the writer, for he believes with the Quakers and is against warfare. But every boy should know the story of the early settlers of his country. They are a part of its history. If these stories tell nothing else they show the progress that has been made in our own day.

A very careful and painstaking writer who has searched all the ancient papers and reports of the old frontier has discovered, so he claims, that Adam Poe never had a fight with Big Foot. Now this is really too bad, because we always believed in the absolute truth of this famous adventure. We may, however, still believe in old Poe's story, because the error in the legend is not in the details of the fight—that has never been contradicted—but it seems that Adam Poe and his companions mistook the Half King's sons for Big Foot and his brothers. I will give the story in my own words, confining myself, however, to the details given by Poe himself, which have been handed down to us without any material variation.

Old Poe delighted in telling of his adventure to the awe-stricken youngsters gathered around the open fireplace in the log house, listening, with ears as sharp and attentive as those of rabbits, to the oft-repeated tale. Whenever the winter wind would shriek outside, the little folks thought sure that it was Big Foot's tribesmen coming to avenge the death of their friend, and the distant howl of the timber-wolf would

make the circle of youngsters gather closer around the buckskin-clad knees of the veteran hunter.

This was not because the children were cowards; they were brave youngsters; and had the Indians in reality charged

Adam Poe Kicking a Goal

upon the cabin, there was not a baby there over five that would not have fought like the little hero he was. The shudders and awe-inspired glances were compliments to the dramatic powers of the story-teller.

In 1782 there were six brothers, splendid, big, athletic

men, of the Wyandotte Indians, who were the pride of heir tribe, and who exerted great influence for good over the other Indians. Not only were these men *big* in stature, but they were *big* in character. They saved many white prisoners from burning at the stake, and by their influence greatly lessened the savagery of Indian warfare; nevertheless, they were famous warriors and greatly feared by the settlers of Virginia, in the neighborhood of Wheeling.

The chief of these Indians was over six feet tall, a Hercules in strength, and of commanding figure, but he had one noticeable defect to his physical beauty, his feet were so uncommonly large that he was known to both the whites and savages by the name of Big Foot.

Almost all of the settlers in the neighborhood of Wheeling feared Big Foot and his brothers. But there was one husky white fellow, Adam Poe by name, almost as big and strong as Big Foot himself, who was not only remarkable for physical strength, but also possessed considerable skill as a boxer and wrestler. Naturally, this young gladiator was anxious for an opportunity to "take a fall out of" Big Foot.

One hot day in July, 1782, word was passed that a small party of Indians were on the war-path ravaging the country a few miles below Wheeling. This coming to the ears of our hero, he enlisted his brother Andrew, also a man of great prowess, and with six other volunteers started in pursuit of the marauders.

The points in the game of foot-ball upon which Adam was about to enter were counted in scalps.

The Indians had not crossed the river at the usual place,

so, after a brief consultation between Adam and his party, Adam sent his brother with the other men along the trail of the main party, while he himself followed that of the big moccasin tracks on the river bank. Creeping along as noiselessly as a cat, with every nerve and muscle tense, he reached a spot which he felt certain must be close to the foe. Lying prone upon a jutting bank, afraid to move further before locating the enemy, whose dug-out log canoes he could see drawn up on the river's edge, he listened intently until he heard the guttural tones of some one conversing near by. Worming his way to the edge of the cliff and cautiously peeping over, he saw the gigantic form of Big Foot. The Indian was stretched out at full length, resting himself under the cool shade of a willow, and was talking to an ordinary-sized Indian who, by comparison with the big chief, seemed but a puny fellow. Poe gazed at his long-sought foe. Cautiously cocking his flint-lock rifle, he took deliberate aim, and placed his finger upon the hair-trigger. The hammer came down with a click, the sparks flew from the flint, the powder in the pan flashed, *but the gun missed fire!*

Both Indians immediately sprang to their feet, and for a moment the red men and the white man silently glared at each other. The next instant Adam Poe, with a mighty leap, cleared the bush in front of him, sailed over the edge of the cliff, and struck with both feet full upon the "solar plexus" of Big Foot.

As Adam struck Big Foot with his heels he flung one arm around the smaller Indian's neck, and all three came to the ground together—first touch-down for Poe. The whip-like crack of several rifles told Adam that his brother and party

were engaging the rest of the savages; and while this was a guarantee that Big Foot was to receive no re-enforcements, it also told Adam that he must himself fight the battle alone with his two powerful foes.

It required all of Poe's herculean strength to keep the half-stunned Indian down. In the meantime Big Foot had wound both his long arms about Poe and gave him a grizzly-bear hug, which made Poe feel that every bone in his body cracked and caused him to release his hold upon the smaller Indian; the latter instantly ran for his tomahawk and advanced with the uplifted hatchet. There was, apparently, no chance for the white man's escape; but no battle is ever won until the last gun is fired. Just as the Indian was about to strike him, Poe managed to make a goal by kicking the Indian with such force as to send the tomahawk gyrating over to the water's edge and the Indian rolling after it.

Big Foot upbraided his companion in the most scathing words to be found in the Wyandotte tongue, and the smaller Indian, recovering the tomahawk and giving Adam Poe's feet a wide berth, again cautiously approached, making false moves with his hatchet in hopes of catching the young backwoodsman off his guard.

Adam Poe was, mentally, as cool as a cucumber, while Big Foot was holding him with a vise-like grip, but it would seem, under the circumstances, that it would have been an easy matter for the other Indian to tap the white man on the head with the tomahawk and end the fight. But Adam's arms were free, and the Indian had already learned that his legs were not only free but also extraordinarily active;

so the red man danced around the squirming white man looking for a good opening.

Down came the keen-edged hatchet, but, as it fell, the skilful boxer warded off the blade, receiving a severe cut on his wrist. Big Foot then lost all patience, and the wary Poe took immediate advantage of his momentary confusion and, with a mighty effort, freed himself from the tackle of the red giant.

Up to this time there had been no opportunity for the use of fire-arms and the two Indians' rifles had remained undisturbed on the ground. Poe snatched up one of them and shot the smaller Indian.

There was still one loaded gun lying on the ground, but Big Foot, disdaining the weapon, suddenly grasped Poe by the collar and the hip and tossed him high in the air—first touch-down for Big Foot. Poe struck with a resounding whack on his back, but, like a cat, he was instantly again on his feet, and, furious with rage at being so easily handled, he sprang with such force and suddenness upon his big opponent that Big Foot had all he could do to defend himself. It was now a rough-and-tumble fight to the finish. Big Foot was suffering from the blow he had received from the heels of Adam's moccasined feet. Adam's wrist was badly wounded, and both men were badly winded.

Big Foot was no boxer and had little relish for the terrible punches and swinging blows which his white antagonist was now raining upon all the most tender points of his anatomy. So he closed in upon Adam for a wrestling-match, and they both fell with a splash into the Ohio River, with Poe on top. The latter grasped Big Foot's scalp-lock

and held the Indian's head under water until he thought he was surely drowned; but the Indian was only "playing possum," and while Adam was drawing his knife to secure the much-coveted scalp, his adversary again grappled him. This time they both rolled into the deep water, and, with one accord, let go their hold and began to swim to the shore, in a race to reach the loaded rifle on the bank. Adam's wrist bothered him in swimming, and Big Foot led; seeing this, the white man turned and swam in the opposite direction, in the hope of being able to dive and dodge the bullet when it came. Again the game appeared in the Indian's hands, but at this critical point Poe's brother Andrew and a companion made their appearance, and the latter, seeing Poe's head out in the stream, took him to be an Indian, and, bringing his rifle to his shoulder, fired, dangerously wounding the plucky Adam in his shoulder. But the only outcry our hero made was to shout, "Kill that big Indian on the shore."

Big Foot now made a fumble by seizing the unloaded gun on the bank. Andrew, unconscious that there was a loaded weapon near at hand, made all haste to load his own gun, which had been neglected in his hurry to mix in the fight. Big Foot was the first to pour the powder into his rifle, but he made another bad fumble when he attempted to draw the ramrod, which he did with such haste that it flew from his hand and fell to the edge of the river. The fraction of a minute that it took the Indian to recover the rod was fatal, and the bullet from Andrew's gun pierced Big Foot's mighty chest.

As the Indian fell Andrew threw away his gun and plunged into the water to save his brother.

Adam Poe was more anxious to secure a score (scalp) than he was to save his own life, and he shouted to Andrew to scalp Big Foot; the Indian, however, did not want to enter the happy hunting-ground with a bald head.

Game to the last, Big Foot, finding himself dying, deliberately rolled into the water, where he sank and was swept away with the rapid current, and although the Poe boys and their party exterminated Big Foot and his five brothers, Big Foot's scalp never decorated the belt of a white man.

It is to be presumed that the brave Big Foot was proudly welcomed by the good Indian spirits to the happy hunting-ground, where no scalps are in danger.

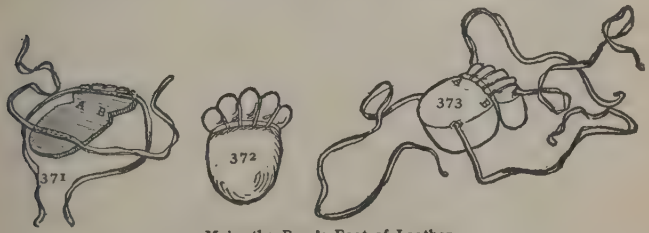
As for our friend Adam Poe, being shot, pounded, thrown about, and half drowned were incidents to a frontiersman's life and considered part of the game. Adam not only recovered from his rough usage, but lived many years and always loved to tell the youngsters the story of his fight with Big Foot, or, as it now appears, his battle with the Half King's mighty son.

Each one of the officers of our society and every scout wears on his hunting shirt his own individual emblem of office and rank. No loyal Son of Daniel Boone should ever appear on the trail, in the field, or at the council-fire without his badge of office, which must be carefully guarded from uninitiated outsiders.

Fitted out with your uniforms and other accessories, you are now ready for hunting the bear and the buffalo.

Ready for the Hunt

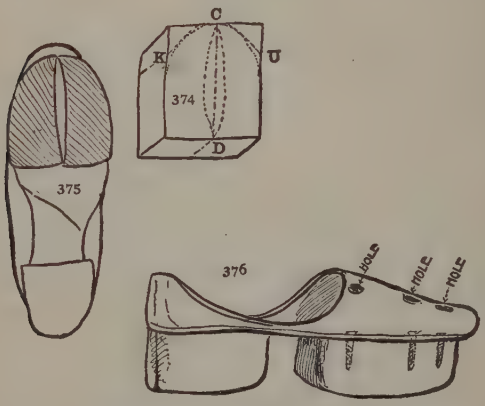
To hunt these animals properly you should choose a time when the ground is covered with snow, preferably a light fall of snow. Now all of us, of course, are well aware that the wild buffalo is practically extinct, and that the bear is certainly not within reach of many of the readers of this book, but such little things as these need never interfere with our hunt. Let Kit Carson assign the part of old



Make the Bear's Foot of Leather

Ephraim, the bear, to any one of the boys he chooses. Let Ephraim visit the shoemaker and have him cut a piece of sole leather shaped like that shown in Fig. 371, and sew two stout thongs to it, as shown in the diagram. He must then procure from the cobbler a piece of soft leather for a cushion. Make the cushion by securing the piece of sole leather (represented in Fig. 371) in the top of it and stuff the cushion with excelsior or other material; stuff it tightly enough to make it firm, but at the same time not too tight; for a cord or thong tied around at the notches *A* and *B* (Fig. 371). should indent the cushion a half-inch or so, as in Fig. 372, showing the bottom of cushion, and Fig. 373, the perspective view.

Before tying this string tightly in place, the toe strings must be attached. These are thongs of leather made fast to the *A B* strings, and bound tightly around from top to bottom, so as to divide the cushion into five little lumps.



Diagrams Showing How to Make the Buffalo's Hoof

If this cushion is properly made it can be lashed to the ball of the foot and will leave a track in the snow or mud like that of a bear.

Making the Buffalo Hoof

A buffalo hoof is even more simply and easily made. A block of wood (represented in Fig. 374) is sawed in half down the line *C D*. Saw off the corners *K C* and *U C*. Saw it in half along the line *C D*, trim off the corners and the inside edge, as shown in dotted lines (Fig. 374). The bottom of the block will take the shape shown in Fig. 375,

and should be of a size proportioned to the bottom of the shoe of the boy chosen to be the buffalo. The buffalo should take a pair of old slippers large enough to slip over the shoe or the moccasin he is wearing, and from the inside of the slipper bore holes down into the hoof-blocks, as shown in dotted lines of screw in Fig. 376. With the screw-driver pushed through the holes cut for that purpose in the top of the slippers, screw the blocks firmly to the sole. It will be easier for the buffalo to walk or run if he has hoof-blocks fastened to the heel as well as to the sole of the slipper (Fig. 376). Of course this will make double tracks, but that will "cut no ice," as they say, for the hunters may just as well suppose that the tracks are made by two buffaloes.

Hunters and Hunted

The game consists in hunting the buffalo, the bear, and the Indian by following the trails they make. The trail of the Indian is made by a boy wearing moccasins.

There may be as many buffaloes and bears and hunters in the game as you choose. The capture of the Indian counts ten points. The Indian is killed by marking him with a bit of chalk, as are also the bear and the buffalo. The death of the bear counts five points and the death of the buffalo five points. If one of the hunters receives a chalk mark from the Indian, the side represented by the Indian and the big-game animals gains ten points. This evens things up. Moreover, the hunter who is chalked is considered killed or disabled and is out of the contest.

The Indian and the game must make distinct trails and must have plenty of time to make them.

As soon as the hunters come in sight of the Indian or of the game they must give a loud halloo, and stop until the pursued has taken the clogs from his feet. The game then resolves itself into a simple race of hunters and hunted. Each one of the big-game animals reaching the home stake with his coat unmarked counts five points for his side. Indians may try all kinds of Indian tricks and dodges to avoid capture. Bears may climb trees, but buffaloes must depend on their swiftness and strength and wolves and rabbits (Fig. 377) on their speed and cunning.

Fig. 377.—Making Tracks

CHAPTER XXII

HOW TO MAKE YOUR OWN SNOW-SHOES

THE snow-shoe has always been an exceedingly difficult problem for a boy to solve. This is not because of lack of skill on his part, but rather because the material used for the net-work by the Indians is practically unobtainable in the settled parts of the country. In every thicket, woods, or brush field, however, we have material from which we can build the brush shoes shown in the following diagrams.

In the first place, we want two sticks of some tough wood like ash or hickory. Make the first one about one inch wide, one-fourth of an inch thick, and about eleven inches long. Smooth the stick off with your penknife, then cut the notches *A B* and *C D* at the ends of the stick, so that the distance between *B* and *C* will be about nine and one-half inches (Fig. 378). Make the other stick similar in form to the first one, and cut the notches *A′ B′* and *C′ D′* so that it will be six and one-half inches between *B′* and *C′*.

Next you need two long, tough sticks, such as you may cut from the growing brush or whittle from good, seasoned wood. In selecting them, choose the ones that are about one inch in diameter at the big ends *G* and *E* (Fig. 378). Cut off the small ends of these sticks so that they will measure about forty-eight inches from *E* to *F* and *G* to *H*.

Next take the longest flat stick and with some fine copper wire bind it to the two long sticks, as a brace and spreader, about seven inches from their big ends *E* and *G* (Fig. 379). Fig. 380 shows the big ends drawn nearer together by a copper wire. The first cross-piece should be just six inches

Plenty of Tumbles, but You Will Soon Learn

below the centre of the top wire, and the second cross-piece, or brace, should be just twenty inches below it (Fig. 379).

To stiffen the frame, run a copper wire from *A* to *D'* and from *D* to *A'* (Fig. 379). Now, if you have secured some rattan, the rest of the work is comparatively easy; but if you have no rattan you must spend some time and trouble in selecting fourteen or more strong, light sticks. Cut one of them so that it will make a stick eight or nine inches long.

Fasten it in the centre of the first brace by binding it with copper wire, and make it fast with copper wire at *E* and *G*. The other part of the stick is fastened to the lower brace

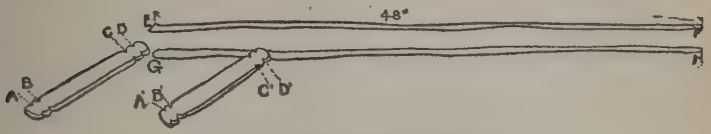


Fig. 378.—The Snow-Shoe Frame Sticks

(*A' D'*) at its centre in such a manner that the upper end of the stick is two and one-half inches below the first or top brace (Fig. 380).

Next bind the tail ends *H* and *F* to each side of this centre stick (Fig. 380). Place a stick on each side of the centre one in such a manner that there will be a space of two and one-half inches along the bottom of the first brace between these two sticks (Fig. 381). Then put the other

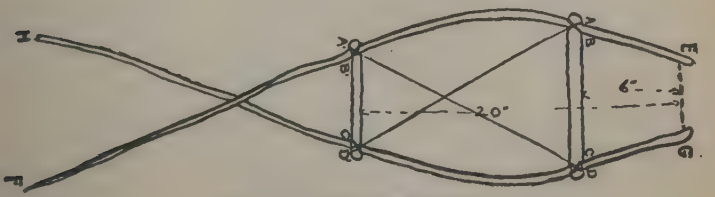
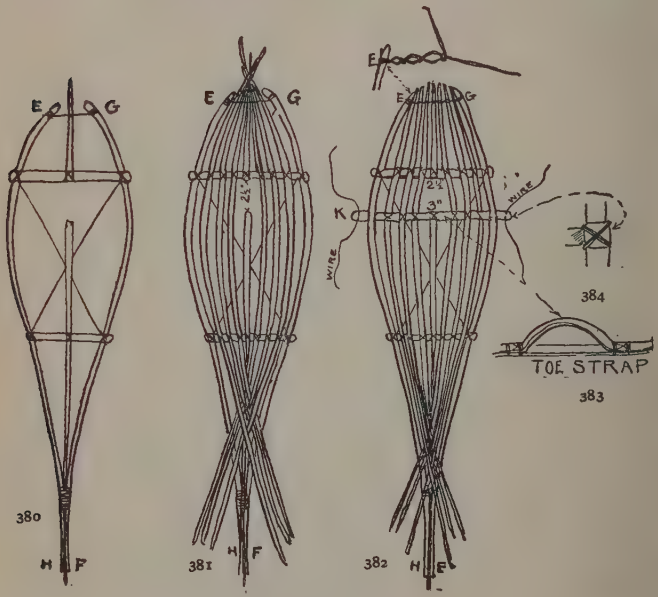


Fig. 379.—The Snow-Shoe Frame

sticks in place (Figs. 381 and 382). When this is done take a piece of copper wire and, beginning at *E*, wind it in a loop around each stick and then in a loop around the wire *E G*, as shown in the detail sketch below (Fig. 382). With a

sharp knife trim off the ends of the sticks at the toe of the shoe and wire the tail ends to the frame, as they are in Fig. 382, and trim off.

We need a strap for the ball of the foot to rest upon.



Evolution of Snow-Shoe

This strap should be woven in and out of the basket (Fig. 382, *K*).

There should be holes punched with an awl or small nail in the strap where it crosses each of the sticks, and copper wire run through them to bind the strap fast to the

basket-work. The two middle sticks should be spread apart at the strap so as to make it just three inches from stick to stick, measured along the top edge of the strap, as shown in Fig. 382. This leaves the necessary toe hole. Now bring the two ends of the strap up around the outside sticks *E F* and *G H*, and bind them there with copper wire (Fig. 384). When this is done, on top of the other strap bind a toe strap (Fig. 383). Bind this with copper wire run through holes in the strap, as you would sew it, and wrapped around and around (Fig. 383).

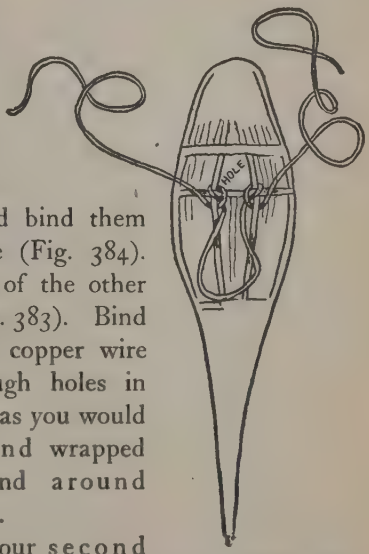


Fig. 385.—Showing How Thongs are Attached

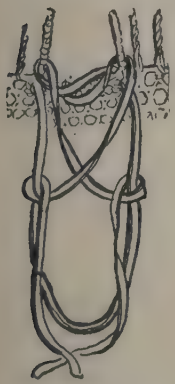
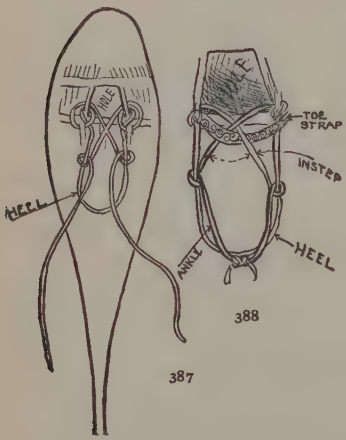


Fig 386.—The Thong That Binds the Toe

Make your second shoe exactly like your first one and you will have a pair of serviceable shoes with which to travel over the surface of the snow. To do this, however, it will be necessary to bind the snow-shoes to your feet, and it will also be necessary for you to wear moccasins, slippers, or heelless soft shoes. Snow-shoers always wear heavy woollen socks. Put on two pair, pulling one pair up around your legs and rolling the

other pair about the tops of your slippers. They will not only keep your feet warm, but the roll around your ankles will keep the snow from out your slippers.

To bind the snow-shoes to your feet you will need two long thongs of buckskin, leather, or some substitute, one for each foot, which will not tie in hard knots or hurt your ankles. To put on the snow-shoes, put the thong in as shown in Fig. 387, place your foot upon the shoe so that the place where your toes are joined to the rest of your foot rests on the strap. Draw the heel loop so that it will fit tightly around the heel of your moccasin. Next bring the ends of your thong down under the side sticks and up across your instep (Fig. 387), making a hitch at each side of the foot and bringing the two ends together around your ankle just above your heel, where they must be tied in a square knot (Fig. 388).



387 388

In Figs. 385 and 386 I have left off the toe strap so as to simplify the diagram, but Fig. 388 shows the toe strap and also shows how the part of the thong which crosses the instep goes under the strap at one side and over the strap at the other. Fig. 386 shows how to make a toe strap with the thongs.

After you have bound your feet to your snow-shoes in this way (Fig. 388), which is the Iroquois Indian method, you will find that while your foot is securely fastened to your snow-shoe its movement is not impeded. The heel is perfectly free to move up or down or sideways, and the toe hole in the snow-shoe allows perfect freedom in the movement of your toes.

There is only one way to learn to walk on snow-shoes, and that is to put them on and try. After stumbling around and falling down, standing on the heel of one shoe with the other shoe, so that it is impossible for you to lift your first foot, and getting into all manner of ridiculous scrapes, you will learn the knack of shuffling along as a person does in slipshod slippers, and after this it will be only a short time before you become an expert snow-shoer.

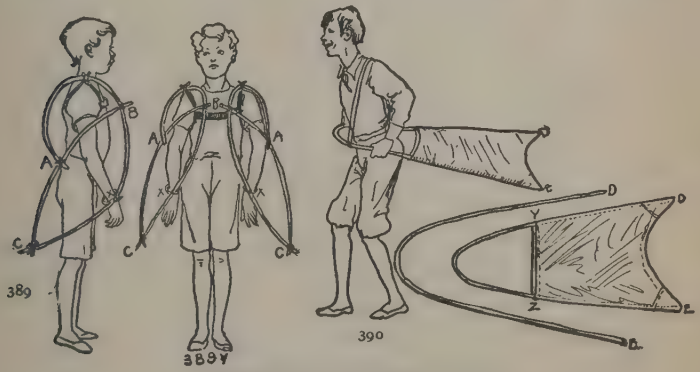
CHAPTER XXIII

HOW TO HAVE A HOLIDAY PARADE

AWAY back in the Dark Ages the thoughtless people were accustomed to have all sorts of extravagant masquerade parades at Christmas time. Later, the wild pranks of the older people degenerated into begging schemes of the little folks, and in the last few years the children have transferred the ancient Christmas mummeries to Hallowe'en or Thanksgiving Day. This must be a foreign innovation, for no self-respecting American boy would think of parading the streets dressed up like a ragamuffin and begging a cent from each passer-by. The ragamuffin part is not so objectionable as is the asking of alms, so the Boy Pioneers and Sons of Daniel Boone must do their part to make these mummeries respectable; for mummeries in themselves are not at all un-American, and may be the cause of a lot of innocent fun.

When "we boys" do a thing we must do it up brown. So when we have a parade on one of these holidays our characters and costumes must have a meaning. The symbol of Audubon is a bird, so why not let Audubon dress as a bird? He can do this by himself, but much better if he enlists the aid of his mother, big sister, or aunt to do the sewing for him. A bird must have wings, and a framework for the wings can

be made of rattan, some old wooden barrel hoops, or any other substance which is supple enough to be bent and bound in the form shown in Figs. 389 and 389Y. A piece of barrel hoop (*C A B*, Fig. 389) is bent into the form of a bow. This is done by lashing a longer piece to one end at *C*, bending it around and lashing it again at *B*, then making a short loop to *A* on the first bow, where it is lashed



The Framework of the Wing and Tail

fast, as shown in the diagram. If the part *C X B* does not hold its position, as shown in the diagram, a spreader must be run across from *A* and made fast to both pieces. Fig. 389Y shows a front view of the boy with the framework of the wings attached to the hands and shoulders. A piece of tape is fixed like a yoke across his breast, and the loops under the arms are then tied to the tops of the wings over the shoulders. Loops made of a piece of leather strap, twine, or tape are fastened to the wing frames at *X*, and through these loops Audubon thrusts his hands. This will allow

the wings to be raised and lowered like those of a real bird. The framework can be made by the boys themselves, but the covering of paper muslin or other cheap material will be best sewed on by some girl or lady friend. However, a

391 392A

How to Put On the Bird Skin

real pioneer and backwoodsman, like a real sailor, should be able to do his own sewing. The wings should be covered on both sides, and then painted with a few lines to represent feathers, as in Fig. 392A.

Besides wings, all well-regulated birds are supposed to have tails. Fig. 390 shows how the tail is made. A piece of paper muslin is cut so that when it is folded at Z *E* and sewed together at *Y D* and *D E* it makes a flat bag. The bent stick (*D E*, Fig. 390) is then put in the tail for a stiffener and a spreader, as is shown in the diagram. The sketch of the boy (Fig. 390) shows how the tail is attached to the boy. But the tail bag must be sewed to the body of the

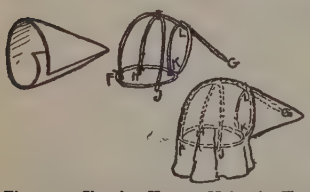


Fig. 392.—Showing How to Make the Head

bird—the hoop in front makes the bird's breast—as in Fig. 391. The body of the bird is simply a loose bag with holes cut into it for the arms and legs of the boy. A pucker string is put around each leg hole, and also the neck of the bag, so that it may be drawn up snugly and tied in place at these points, as is shown by the boy in Fig. 391. Make the beak of the bird of a piece of card-board by rolling it in funnel shape, as in Fig. 392. Make the framework of the head of the bird out of pieces of barrel hoop or other suitable material. Make first a hoop (*F H K J*) large enough in diameter to slip easily over the head and rest on the shoulders of the boy who is wearing it. Make another hoop (*L K*) to which the beak may be sewed or laced. Now, from *F*, at the back of the head, run an elastic stick through the hoop (*K L*) and allow the end (*G*) to extend into the beak. Support this stick (*F G*) by another hoop (*H J*) and let this be covered by a cloth hood with two big eyes painted on it, as shown in Figs. 391 and 392A. Now, then, get into the bag, as in Fig. 391, put on the shoulder yoke, and attach the wings, as in Fig. 389. Slip the hood over your head and shoulders, and you will then look like Fig. 392A

Fig. 393

Fig. 394.—Kit Carson's Costume

Fig. 395.—Johnny Appleseed's Costume

and be ready for the parade—the first live killaloo bird ever seen by man.

Fig. 393 shows a large pasteboard arrow-head nailed to two cross sticks. A duplicate piece of pasteboard should be fastened over the sticks so as to conceal them. A piece of cloth is then stitched to the bottom of the arrow-head (Fig. 394).

Johnny Appleseed can tie a small Christmas tree to one end of a broomstick. Under the branches fasten a piece

The Christmas

of green cloth on which evergreen twigs can be stitched. The bottom row of twigs should be sewed around the bag first, then the next row, like the shingles of a house. When Johnny Appleseed gets under the bag and grasps the broomstick he will be the first walking tree seen in this or any other country. In a similar manner each officer of the society can transform his insignia of office into a costume, and each pioneer can carry a log cabin or stockade on the

end of a pole arranged in the same manner. The paraders may carry banners or transparencies with mottoes upon them such as: "Protect the Birds," "Save the Trees," "Preserve American Traditions" or "Canadian Traditions," as the case may be.

Of course, we must not forget Santa Claus in our procession, but we must remember that the American Santa Claus is as distinctive a character as Daniel Boone. He

Parade

is the one described in the verses of "The Night Before Christmas." He is a fat little gnome, and as jolly as he is fat.

Place a pillow inside the coat for a paunch, make a beard of white cotton, and have fur or cotton-batting trimmings for coat and tops of boots. He must occupy a position on the Yule-log in the parade.

After the parade, build the Christmas fire with the Yule-

log, or a bunch of Christmas firewood, and that will be an appropriate camp-fire for this jolly time of year.

When you break camp, give the Boone cheer, and end it with "A merry Christmas to all, and to all good-night."

Mummeries of this kind will not only be lots of fun, but they will also do great good by attracting the attention of people to the objects and aim of THE BOY PIONEERS. And if you can make them fit in with some worthy charity for Christmas, all the better.

CHAPTER XXIV

HOW TO MAKE AND USE SKATING WINGS

DO you Pioneers know how to make and use skating wings or a skate sail? If not—well, here is the way to make them, and when you learn to use them you'll have some of the best and raciest sport you ever had.

In the first place, we need some cloth, linen, cotton, silk, or bed sheeting from which to make our "white wings." As I do not know just what cloth you have available, I will suppose it to be a heavy twill sheeting two yards wide, known as unbleached Atlantic A. If you can cut the cloth so as to make the selvage form the edge of the sail it will save us a lot of hemstitching.

I have a pattern of a winning sail which is twelve feet long in the centre and nine feet at the base, and I have made my diagrams with these proportions. This is intended for a five-foot boy.

To make what I call the Erie sail, but which the Abricombie & Fitch catalogue calls the "Dan-Beard" sail, cut your cloth on the bias, as shown by the line *A B* on Fig. 396. We must so cut this line *A B* that it will make the two halves of the sail and the base, or bottom, of each half will measure a little over four and one-half feet, to allow for the overlap, so that when they are sewed together along the centre line

the sail will then measure nine feet at the base. After cutting through the line *A B*, take the top piece (*A B C*), lift it up, and turn it over so that *B* on the top piece is at *A* on the bottom piece. This will make a triangle of cloth the shape of Fig. 397. The overlap will make a deep hem down the centre. This gives you the selvage on two sides of the triangle.

Next spread your sail flat on the floor and measure from the centre hem (*D*, Fig. 397, 20) each way along the edge of

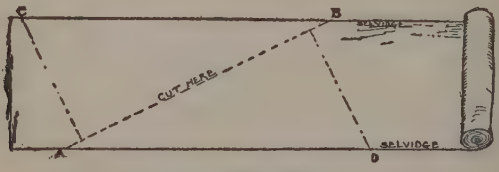


Fig. 396—Cut the Cloth This Way and Save Labor

the sail one foot nine inches, and mark the two points *X* and *Y*, which will be three feet six inches apart. Now measure back from *A* and *B* along the selvage one and four-fifth inches, and mark these two points *A E* and *B F* (Fig. 397, 20). Cut your piece of cloth off from *E* to *X* and from *F* to *Y*—that is, cut off the piece *A X E* and *F Y B*. You are now ready to turn back the edge of the sail and make the hem, which will make the big end of the sail slightly curved. This we do to allow for the spring of the spars when the sails are tightly set. The sail may be lashed to the gaff (*C D*, Fig. 397) by simply running a stout line through the hem and around the gaff from *C* to *D*, and making it fast at the two ends of the stick. But we are going to do it in

ship-shape order,.so we will procure a number of metal eyelets, known as grommets. Set them in the sail a foot apart, but leave greater space where the hand will come at *B* on Fig. 397. The point of the sail, or apex of the triangle, must be reinforced by sewing a stout piece of triangular cloth to each side of the sail, as shown in Figs. 397, 17 and

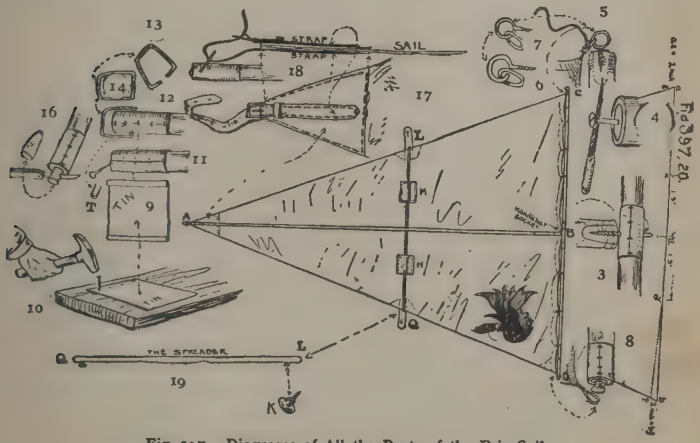


Fig. 397.—Diagrams of All the Parts of the Erie Sail

397, 18. On one side of this triangle we put a piece of strap with a buckle; on the other side we sew a piece of strap with holes, as shown by Fig. 397, 17.

Fig. 397, 18 shows the view of the edge of the sail, the pieces of strap being indicated by black lines, and between them are the two pieces of cloth, and sandwiched between the two pieces of cloth is the sail itself. The spreader (*L Q*, Figs. 397 and 397, 19) crosses the centre boom at a point five feet aft of the gaff (*C D*). To hold the spreader in

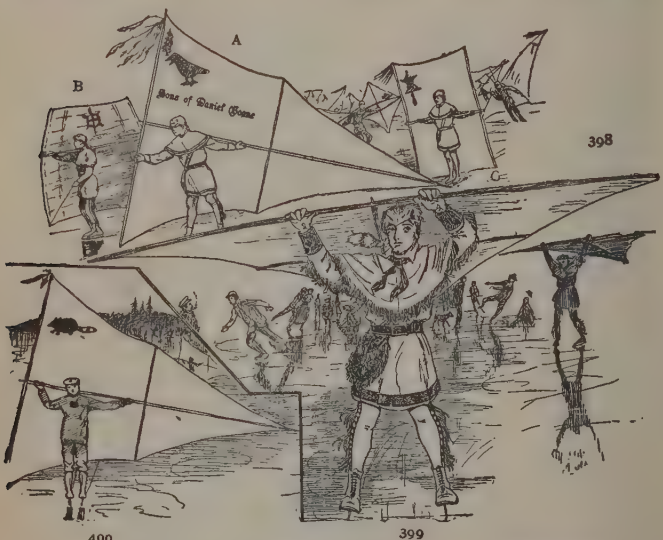
place, sew on two small pieces of drilling (*M* and *N*) leaving a space in the centre under which the spreader may be slid. At *L* and *Q* sew on two pieces of leather each of which has a button-hole cut in it, as shown in Fig. 397. Your sail is now finished, and we must make the spars to fit the sail.

The boy who formerly won all the skate-sailing races at Toledo used the socket of the handle-bar of a bicycle, through which he ran the gaff (*D C*) and into the socket of which he fitted the end of the boom (*A B*) at *B*. When this was done and the spreader put in place, he tightened the sail with the straps shown in Figs. 397, 17 and 397, 18. But another skate sailer has given his name to this arrangement, and it is called the "Joelewis"; but in the real "Joelewis" the triangular piece and the straps shown in Figs. 397, 17 and 397, 18, are fastened with copper rivets in place of being sewn together. The spars to the Erie sail are all made of white fish-pole bamboo, or, as it was formerly called, fish-pole cane. This is a very strong and light material for spars, but is liable to split and crack, especially at the ends. To prevent this, wrap the ends with pieces of metal. Melt the solder from an old tomato-can and knock it apart; unroll the side piece; spread it upon a board and hammer it out flat with a hammer. Now cut it to the proper size to fit around your spar; it can be cut with a pair of old shears. When you fit it around the spar see that it overlaps half an inch or so; then spread it out again upon a board, and fold over the two raw edges, as shown in Fig. 397, 9. Each of these folds should be a quarter of an inch wide, and the two quarters will make up for the half-inch which you allowed for the overlap. Hammer the fold down flat, then

with a wire nail punch holes in it, as shown in Fig. 397, 10. Now wrap the end of your spar with the tin, as in Figs. 397, 3, 5, 8, 11, 12, and 16. Tap it with your hammer until it hugs the rod closely and the metal edges fit evenly together, then take an awl or some similar instrument, run it through the holes punched in the tin, and carefully work it so as to start little holes through the hard surface of the bamboo underneath, after which take some staple-tacks (*T*, Fig. 397, 11) and drive them through the holes in the tin into the bamboo. This will join the edges of the tin and look as if they had been sewed together. Next whittle some wooden pegs of the form of the one shown in Fig. 397, 16. Make them so that they can be forced into the ends of the bamboo like corks into a bottle. Carefully drive all the wooden pegs into the open ends of the spars, and trim off the protruding parts with your knife, as shown in Fig. 397, 16. If you have no bicycle handle-bar socket into which your boom can fit at *B*, cover the centre of the gaff (*C D*) with a piece of tin as you have the ends of the rest of your spars. Take a long screw and screw it into the plug of the boom (*A B*) at *B* (Fig. 397, 4). Now file off the head of the screw and make a hole through the tin and the bamboo of the spar (*D C*, Fig. 397) into which the head of the screw can fit. (See Fig. 397, 3.) At one end of your spar (*D C*) fasten a screw button, or knob, like the one shown at *K* (Fig. 397, 19), and you will have Fig. 397, 8. Next take a good, strong screw-eye and with the hatchet blade spread it apart at the joint, as shown in Fig. 397, 6. Through the openings slip the stout link of a chain or an iron ring of any kind, then hammer the parts together again, as shown

in Fig. 397, 7. Now fasten the screw into the plug at the *C* end of the spar (*D C*, Fig. 397, 5).

A loop of string in the end of the sail at *D* fits over the knob shown in Fig. 397, 8. The loose end of the string at



the corner of the sail at *C* runs through the ring. By pulling on this string you tighten the sail and then make it fast.

The spreader (Fig. 397, 19) is made of any sort of stout elastic wood with a couple of buttons screwed in it, as shown in the diagram. Slip the spreader through *M*, under the spar *A B* (Fig. 397), and through *N*, then fasten by bringing *L* and *Q* over and buttoning them to the buttons. Take

your sail to the pond, lake, or river and practice with it until you can sail with the best of them. Fig. 398, *A*, shows one of these sails on the wind. The skater is going in the direction his toes point. Fig. 400 shows one of these sails

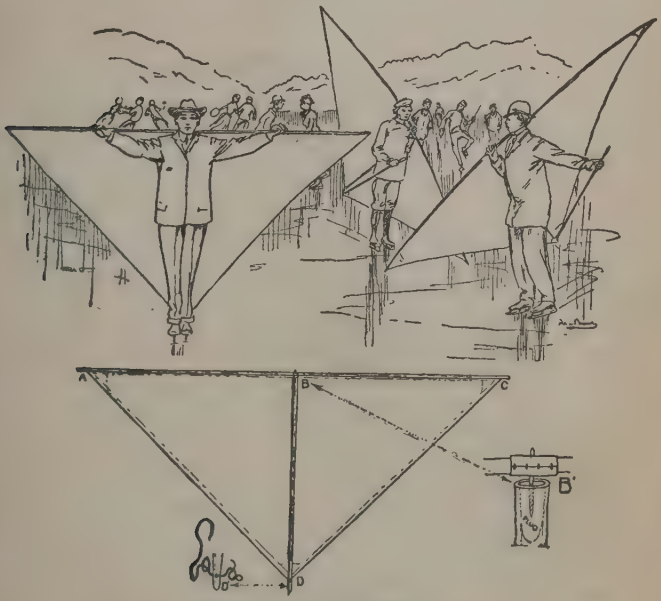


Fig. 401.—The Cape Vincent

before the wind. The skater is coming right at you. Fig. 399 shows a skater coming about. When you want to stop or change your course, come up so that you face the wind, at the same time raise your sail up over your head, as the one in Fig. 399 is doing, and as the one in the background has done. Then turn around and adjust yourself to the

new course, bring down the sail so that the boom is on your shoulder, as in Fig. 398, *A*, and scoot along. Fig. 398, *B*, shows a square-sail pattern with a gaff at each end and a boom, the latter resting on the shoulder of the skater. Fig. 402 shows the double diamond first described by Colonel

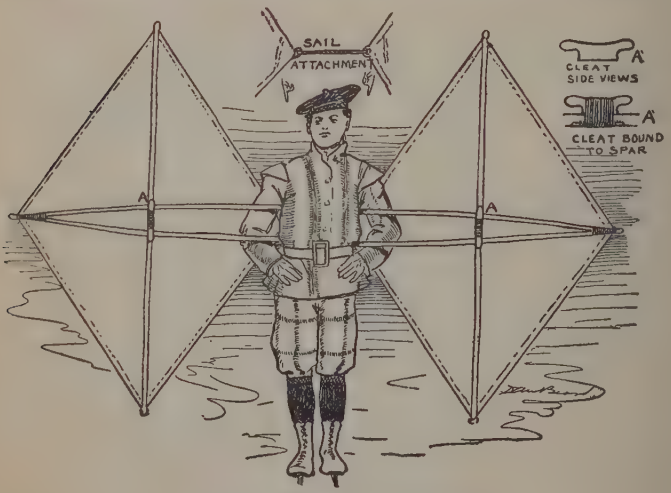


Fig. 402.—The Norton before the Wind

Norton and known as the "Norton" sail. Fig. 401 shows the Old Cape Vincent sail, and Figs. 398, C, and 403 show the Mugglesee.

With the Erie sail, as we have described it, a boy can hold his own even with an express train. If he sees danger ahead, all he has to do is to let go his sail and avoid the air-hole or obstruction, as any good skater can do without

difficulty, and when the fun is over he slips his spars loose, rolls up the sail, puts it over his shoulder, and starts for home. Skate sailing is good fun on a small pond; it is sport on a little bigger body of ice, and is wildly, grandly exhilarating upon a wide expanse of ice. Make a sail and try it.

Sails Which Can Be Rolled Up and Carried Over One's Shoulder

Fig. 404 shows a lateen sail which may be carried on the shoulder of the skater, bound to his person only by the pressure of the wind and the grip of his hands.

Fig. 403.—The Mugglesee

By unlashing the spreader the sail may be done up in a small roll for transportation, the spars being wrapped up in the canvas.

Make the two yards, or booms, the same length, and let that length be governed by the dimensions of the yacht, *i.e.*, the skater. This is best ascertained by experiment; take two cane-fish poles, tie the lower ends together, and hold them in the position of Fig. 404; you may thus judge the length of the spreader.

Stout cane or bamboo will do for the spars, and even light cane may be made to answer the purpose if a number

of spars are added, arranged like the ribs of a fan, making what canoe-men call a bat sail.

As the strength of the prevailing winds varies in different sections of the country, so must the strength of the spars

Fig. 404.—Lateen with Two Booms

vary—light for the Ohio and Mississippi Valleys and stout for the East and West. Screw-eyes may be fastened securely to the ends of the spars or small holes drilled through them for the line which is to lash the sail in place (Fig. 405).

As may be seen by Fig. 405, the sprit or spreader is made with a crotch at each end to hold the spars, and is also supplied with holes for twine with which to lash the sprit in place when spreading the two spars apart.

If the spars are made of good, straight-grained wood let them be one and a half inches thick in the middle but somewhat lighter at the ends. After they are finished put the

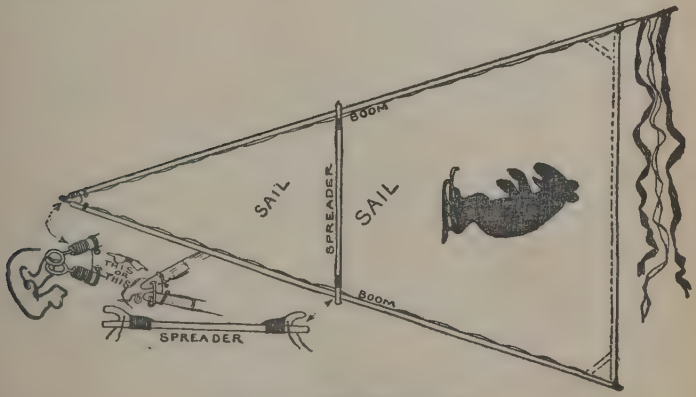
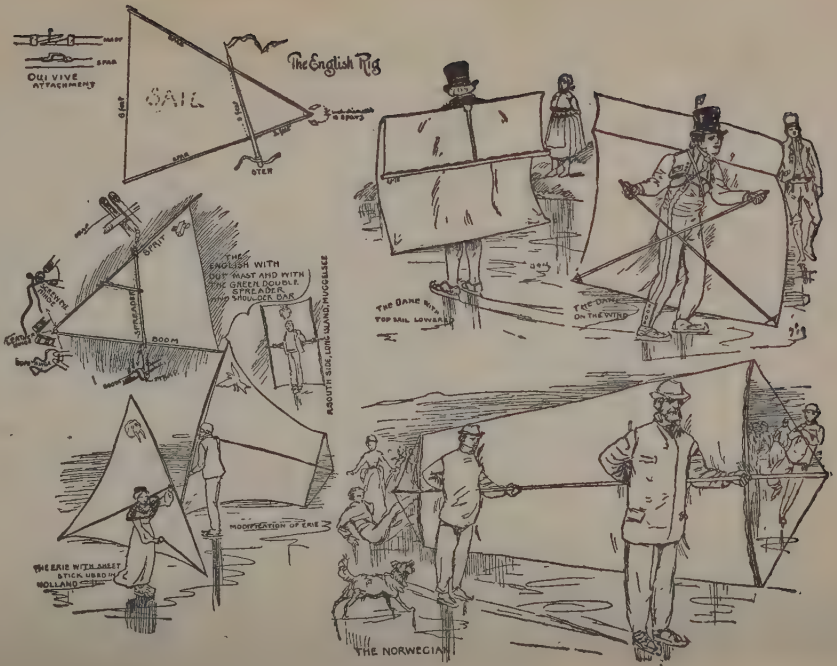


Fig. 405.—Double-Boom Lateen

spreader in place, lash the two lower ends together and lay them over sail-cloth on the floor, and cut the sail according to the pattern thus made.

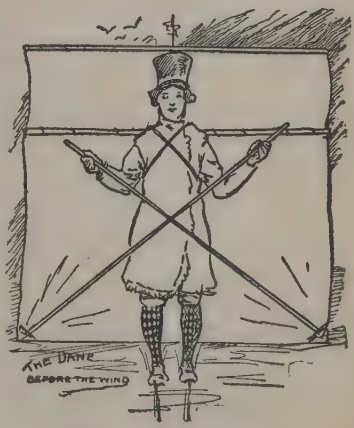
When cutting the sheeting allow enough margin for a wide hem; also make some triangular pieces to reinforce the clews (corners), where loops of stout twine must be sewed.

Use any cloth suitable for canoe sails; heavy twilled sheeting is possibly the best. Brightly colored sails always present a charming appearance on the ice.


The English Rig
SAIL
OUI VIVE ATTACHMENT
THE ENGLISH WITH CUT MAST AND WITH THE GREEN DOUBLE SPREADER AND SHOULDER GAF
THE GAFF RIG TOP SAIL LOWERED
THE GAFF ON THE WIND
MODIFICATION OF ERIE
THE ERIE WITH SHEET STICK USED IN HOLLAND
THE NORWEGIAN

Sails of Europe and America

The sails may be white with colored bands or wholly white with the private insignia of the owner cut from "Turkey red" and stitched in one corner. A properly made sail should have eyelets sewed in the hem about six inches apart along the spar lines, but some authorities say that the eyes of common hooks and eyes make a good substitute. It is possible to lash the sail to the spars by passing the twine through holes punched in the hem; but such unworkman-like sails are only excusable when one's time is limited.



The Dane with Topsail Up

A bunch of particolored ribbons makes an appropriate pennant for a skate sail and looks gay streaming in the wind.

Fortunately the falls one gets when going at high speed are almost invariably sliding falls and seldom result in bruises or even scratches. In picking up your sail in a stiff breeze hold it up over your head and face the wind. A roofer on one of the sky-scrapers in New York City lost his life by not observing this rule; he stood to the leeward as he picked up a sheet of copper, and, despite his frantic efforts to save himself, was blown from the roof. Fortunately in your case the worst that can happen is a tumble on the ice.

Of course it is understood that small ponds and rinks,

however handy they may be for figure-skating, are not the proper field for skate sailing. I have had so many inquiries regarding the proper location of the sort of ice field for skate sailing that it is well to state here that the frozen inlets and bays along Long Island shores, the Hudson River, and the small lakes with which this country abounds are all good fields for the skate sailor. Mr. Langdon Gibson, a fellow-member of the Camp Fire Club of America, who was with Lieutenant Peary on one of his polar expeditions, tells me that even in that country the skating is good, and in early winter smooth, black ice extends along the coast for miles and miles as far as the eye will reach, forming an ideal skating field, which, for extent, smoothness, and safety, surpasses anything in the United States. From which we see the skate-sailor's field extends from the polar seas down to the neighborhood of Mason and Dixon's line, and, at times, some distance below it. I learned to skate in the State of Kentucky, and, as far as my memory goes, we had better skating there than is usual around New York City, where the snow so often covers the ice.

Along the Ohio River the mercury at times drops below zero, which all must allow is cold enough for skate sailing.

CHAPTER XXV

HOW TO BUILD A PIONEER BOB AND A CHEAP BOB-SLED

Any Boy with Gumption Can Make One

IT seems the most natural way to write a boy's book is to begin with the spring time and end with the last breath of old winter, and that is the reason that all the Beard books are planned that way.

That is also the reason why you find a bob-sled in the last chapter and the reason that this book also ends with a description of a sled. In the other books previously mentioned the reader can find plans and descriptions of all sorts of bob-sleds, from one made with flour-barrel runners up to the latest and most improved racing bob-sled. But none of them seem so appropriate for this book as does the following one, made of the rough material from the forest.

All sorts of milled lumber is expensive, but there are few farms or country places which do not have sufficient spare material from which a boy with gumption can construct a bob-sled upon the plans shown by Figs. 407, 408, and 409, 19, with which he may slide downhill with the speed of an automobile and some of the danger.

But if the milled lumber is out of the reach of the lad, the wood lot offers him material for

which it is possible to build with no other tools than an axe and an auger. Because it is possible to do all the work with these tools, do not on that account confine yourself to them; if the contents of the tool-chest are at your command, a good two-handed saw, for instance, will cut the logs better for the purpose than an axe, even when the latter is swung by the hands of an expert.

For runners take a log from six to eight inches in diameter, peel the bark from it, and saw or cut it in sections

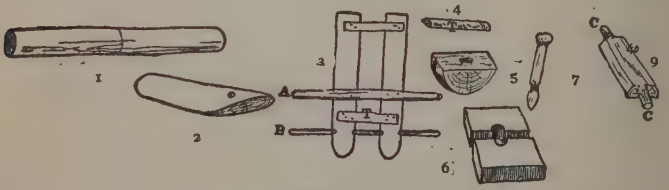


Fig. 406

(Fig. 406, 1), so that you will have four pieces, each three feet long; next taper off the bow ends, as in Fig. 406, 2; then round off the sharp edges, as they are shown by Figs. 407, 10 and 407A.

Cut some braces (*T*, Fig. 406, 4) with one side flattened, and spike or nail them to your log runners, as in Fig. 406, 3. The two hickory bars (*A* and *B*, Fig. 406, 3) are the hand and foot bars for steering the bob.

Of course, you can understand that each sled must be movable and not nailed to the top or reach-board, as it is

called; the play of the stern bob prevents jolts, and the bow bob must be movable from side to side in order that the craft may be guided.

As a rule, an iron bolt like the one shown in Fig. 409, 17, with a nut screwed on the bottom end, is used for the bow bob; but if you have no bolt, a peg made of good, strong wood, of the form shown by Fig. 406, 7, can be used.

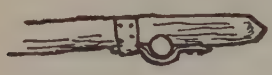
Cut a section of an oak log (Fig. 406, 5) and bore a hole with a two-inch auger through its middle; then take a block of wood two inches thick and one foot long and bore a hole (somewhat smaller than the bolt) through its centre; after which saw through the centre of the board, as in Fig. 406, 6. Do this so that the peg or king-bolt (Fig. 406, 7) may be run through and the pieces fitted together around the small part of Fig. 406, 7.

But there must be something to hold these two pieces together. Therefore, provide two flat braces twelve inches long to run from runner to runner (*X* and *Y*, Fig. 407A) under the block (Fig. 406, 5), to which they must be securely nailed.

As the top or reach-board of the pioneer bob-sled is not made of a plank, but of a number of poles cut in the wood lot, a piece of one-inch wood (*E*, Figs. 407A and 408), must be nailed across the poles to hold the top or head of the wooden king-bolt in place.

The stern bob, as we have already said, must be movable, but it must not have much chance to move from side to side, and to prevent such a motion a rope is run through holes bored in the runners and secured to the under side of the reach-board.

But the stern or rear bob must run up and down over the uneven places, and to enable it to do so an axle made of a piece of hard-wood, like Fig. 406, 9, is used, or a good, strong hickory-stick axle, like the one in Fig. 407, 10, is securely spiked to a block of wood and further secured by straps of sheet iron or tin from old tin cans, as shown in Fig. 407, 10.



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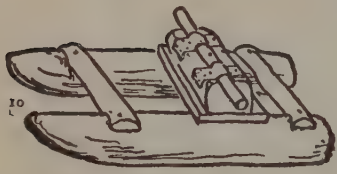

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Fig. 407

A better axle can be made by boring a hole through the big block of wood (Fig. 407A, 11) and driving a stout, hard-wood axle through the hole. Fig. 407A, 11, shows a section or rear view of the bob. In Fig. 407, 8, the axle is held in place by a hoop of several old leather straps nailed to the reach-board, but a much better arrangement is shown by Figs. 407, 11, and 407, 12, which are a side and end view. Here you can see that there are two strong blocks nailed to the reach-board, and through holes bored in them the axle protrudes and is held in place by pegs or pins driven through small holes in the ends of the axles.

Fig. 408 shows a top view of the finished pioneer. *D* is the reach-board, *A* the hand-bar, and *B* the foot-bar. The same letters correspond to the same parts in the side view (Fig. 407A). Fig. 407A, 14, shows how to shingle the bottom of the log runners with pieces of tin or sheet iron. The arrow shows the bow or front of the runner.

Throw a number of tin cans in the fire and leave them there until the solder melts, and the pieces can then be unrolled, sand-papered, and nailed to the runners. But if you are in a hurry and want to try your rustic bob-sled, cover the bottom of the runners with a thick coat of any sort of grease, tallow, ham fat, or any other material that will make them slippery.

In very cold weather ice shoes can be made by pouring water on the runners and allowing it to freeze.

The reader will notice that the reach-board is nailed to cross-pieces and that these cross-pieces, extending out on

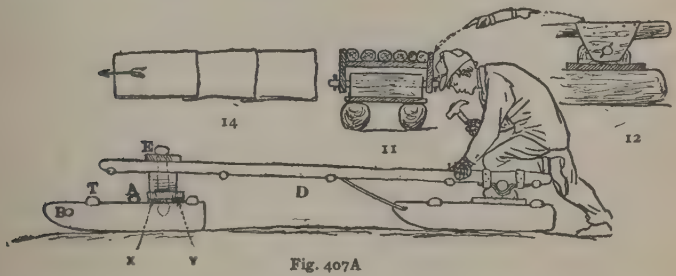

Fig. 407A

each side, form a support to which a guard-rail is nailed, to protect the passengers' legs as well as to form rests for their feet on the projecting cross-bars.

But if there is milled lumber to be had, a real bob can be made on the plans shown by Fig. 409, 17, front section; Fig. 409, rear section; Fig. 409, 19, side view. Fig. 409, 18, shows a plank one inch thick, three feet long, and five inches broad, from which the runners are sawed, as shown by the dotted lines.

In this bob an iron bolt is shown for the king-bolt, although a wooden axle is used for the rear sled. But even this axle had better be made of an iron bolt if the latter is procurable.

The runners should be shod with half-round iron, the reach-board made of a plank ten feet long, one foot wide, and one inch thick. You will then have a light, handy,

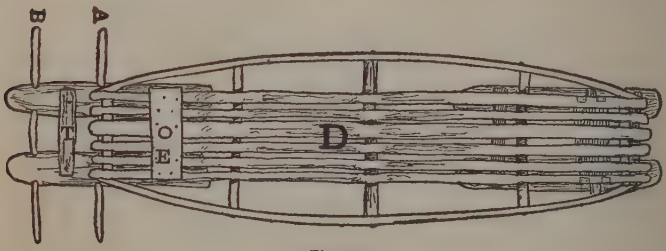

Fig. 408

fast, and durable bob-sled which should outlast your own boyhood days and descend in good order to your younger brothers.

Now that your bob-sled is finished and the work of the day over, you can go to the hill and try its speed; but if you coast at night, it is a good idea to have the hill lighted with lanterns.

Make the lanterns of paper (Fig. 411, *L*, *Q*, and *Y*; but first saw off some sections of a log or cut a board up into squares and saw off the corners of the squares (Fig. 411, *P*); bore a hole in the middle to receive the end of the stick (Fig. 411, *E*), drive it in as in Fig. 411, *A*; next drive three nails in the board (Fig. 411, *A* and *Z*) to hold the candle,

then tack, glue, or paste the paper around the board, as in Fig. 411, *Y*. The proper way is to tack the paper to the block and paste when the edges of the paper join each other.

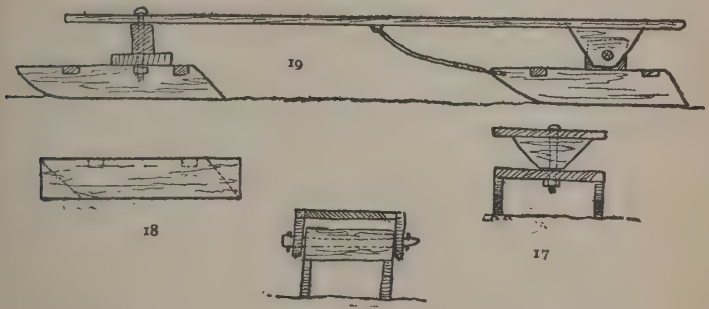

Fig. 409

It was in this manner that the torches of political parades were made before 1860, and when the paper used is of various colors the effect is very pleasing to the eye.

The horses are seldom in use in the evenings, and may be pressed into service to haul the bob-sled up the hill,

Fig. 410

thus doing away with the only drawback there is to a long coasting hill (Fig. 410).

Bicycle lamps are good for head-lights for the bobs, or torch-lights, if they are fastened to the ends of sticks. Balls made of old yarn, rags torn in strips, bunches of dried moss, balls of lard-oil lamp-wick, or balls of any sort of firm and absorbent material, when soaked with kerosene, make good and durable torch-heads, which, once ablaze, will not be extinguished by the wind. In a wooded section, bunches of split pine-knots or folded pieces of birch bark fastened in a split in the end of a stick make a backwoodsman's torch. With some one of all these things at his command, the reader cannot fail to devise a plan to illuminate the coasting hill.

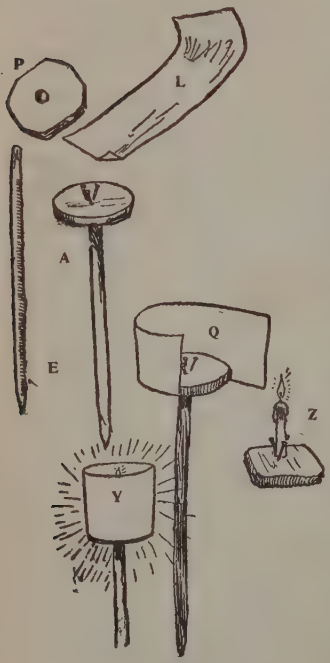

Fig. 411

A rousing big camp-fire at the starting-point on the hill is always appreciated by the "frozen turnips" among the coasters, as a place where they may thaw out their congealed blood. The camp-fire also makes a centre, a meeting-place,

a council-fire, around which the weary may group themselves, using their bob-sleds for seats—a place where one may gossip, tell stories, or get better acquainted with the other coasters.

You may make your torches and fires in any old way, but do not build your bob-sleds with the sort of steering apparatus which protrudes above the sled in front of the coasters; avoid wheels and cross or T helms placed in front of the steersman.

THE END

INDEX

Adam Poe, 277.
Adam Poe elevator, 149.
Arbor Day, 18, 22.
Arm-chair, to make, 215.
Audubon's Day, 10, 64.

Bake-oven, stone camp, 80.
Bark shingles, 108.
Barrel staves for wainscot, 203.
Bars, parallel, 127; grip, 247; horizontal, 128.
Beans baked in pot, 86.
Bell, Major-General, 31.
Big Foot, 279.
Biscuit, 83.
Bobber shelf, 223.
Bob, pioneer, 318.
Bob-sled, 322.
Boone Day, 10–12, 16, 17.
Boone flag, 8.
Boys' club, how to form, 88–92.
Boy Pioneers, Society of, 30, 91; constitution of, 111–114; objects of, 23.
Bread, baking of, 83.
Buffalo Bill, 31.

Cabin door, hinges and latch, 122.
Cabin rod rack, 216.
Camp, movable, 45.
Camp-fire, to make, 78, 79; ordinary, 81; in-door, 85.
Camping, summer, 76–87.
Chapman, Jonathan. See "Johnny Appleseed Day."
Clambake, 85.
Clam roast, Long Island, 84.
Clark, George Rogers, 34.
Club-house, boys', to build, 96; to decorate, 201.
Constitution, 111–114.
Contest, sign-language, 173; vaulting, 132.
Costume, Pioneer, 6, 7.

Dam, 140–142.
Daniel Boone, 11–17.
"Daniel Boone and the Hunters of Kentucky," 15.
David Crockett's Day, 10, 165–175.
Dewey, Admiral, 31.
Door, bow-arrow, 121; cabin, 122.
Dressing race, 166.
Drying reel 223.

Election of officers, 89.
Elevator, Adam Poe, 149.
Emblems, 8.

Flag, Boone, 8.
Flapjacks, 83.
Flint and steel for camp-fire, 78.
Fort, 93; to build, 95–104; snow, 274.
Fort of the Sons of Daniel Boone, 91.

Games, renegade, 55; Simon Kenton, 38; running the indian scouts, 251; catching the raccoon, 255; running the gantlet, 257; gander-pulling, 264; goose hangs high, 261; big foot, 276.
Gander post, 262.
Girty, Simon, the renegade, 34, 37, 50–55.
Goose, to make, 261.

Grip bar, 247.
Guns, to handle, 194–197.

Hole swimming, 139–142.
Holiday parade, 296–302.
Horizontal bar, 128.
House, Mandan council, 106–110.
House-wagon, to rig, 64–75.
Hunting shirt, 7.

Initiation, new form of, 185–189.

Jersey, to take off, 198.
Johnny Appleseed Day, 10, 18–33. See Arbor Day.
Jumper, Johnny Appleseed, 129, 130.

Ken, wire, 115.
Kenton, General Simon, 34–40.
Killaloo totem-bird, 239.
Kit Carson's Day, 11, 268.
Kresap, 34.

Land boat, Sam Houston, 46.
Language, American Indian sign, 153–164.
Leggins, 6.
Lincoln's Day, 9.
Lipkin, 119.
Litter, 26.
Logan, 5, 34.

Mandan council-house, 106.
Meetings, club, 93.
Minnow net, 225.
Montgomery, Alexander, 34, 38.
Muir, John, 32.

Officers, 7, 89, 112.

Parade, Arbor Day, 26; holiday, 296–302.
Parallel bars, 127, 242.
Pioneer bob, to make, 318–323.
Pioneer days, 9.
Prairie schooner, 39; to make, 42–45.
Punk, 78.
Pushmobile, 56; to make, 58–63.

Rabbit, broiled, 87.
Raccoon, 255.
Race, dressing, 166; leap-frog, 168; wheelbarrow, 169; prairie schooner, 171; observation, 172; pole-vaulting, 132.
Rack, cabin rod, 216; Walton shack, 217.
Reach-board, 42.
Reel, drying, 223.
Renegade, game of, 55.
Roosevelt, Theodore, 30.

Sam Houston land boat, 46.
Scout, 93.
Secretary, to build, 207.
Shafts, 45.
Shelf, bobber, 223.
Shoe-laces, to tie, 199.
Sign language, 153–164.
Simon Kenton, boys' game, 38.
Simon Kenton Day, 10, 34–49.
Skating wings, 303.
"Slippery, Kentucky," 145.
Snow-shoes, to make, 289–295.
Society of the Boy Pioneers, 30, 91; of Sons of Daniel Boone, 31, 91.
Sofa, to make, 213.
Sons of Daniel Boone, Society of, 6; Fort of, 91; constitution of, 111–114.
Stockade of the Boy Pioneers, 91; to build, 96–104.
Stool, to make, 212.
Stroke, English racing, 135; trudgeon, 137; crawl, 137; dog, 138.
Sweep, swimming-pool, 143.
Swimming hole, to build, 139–142.
Swing, rope, 126.

Table, to make, 214.
Tally-gun, 28.
Tenderfoot, 93.

Tents, 76–78.
Test, hawk-eye, 174.
Thatching, 107, 119.
Tomahawk, throwing the, 177; how to score a hit, 179; team-work with, 181.
Top-notch, Roosevelt, Dewey, Bell, Buffalo Bill, Muir, 30–33.
Totem signs, 8; totem-poles, 227; totem-boards, 228; totem-bird, 232.
Tree planting, 25.
Trudgeon, 135, 136.

Vaulting-poles, 130, 131; vaulting-pole race, 132–134.

Wagon, sail, 46.
Wainscot, barrel-stave, 203.
Wall-paper, hanging, 205.
Walton shack rack, 217, 222.
Wammus, 4, 14, 166.
Waterproof tent, 77.
Weapons, pioneer, 176.
Wheels, baby-carriage, 43.
Wings, skating, how to make, 303–316.

Yells, 270.

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